

# CHESTERFIELD COUNTY

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[www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp](http://www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp)

*Our vision is to be an acknowledged leader in the purchasing profession, both nationally and locally, providing innovation and excellence in customer service.*

*Our mission is to continuously support our customers in performing their mission by providing quality purchasing services.*



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**SPECIFICATIONS AND INVITATION FOR BIDS**

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**Purchasing Department  
9901 Lori Road  
P. O. Box 51  
Chesterfield, VA 23832-0051  
Telephone No. (804) 748-1617**

**CHESTERFIELD COUNTY PURCHASING DEPARTMENT  
GENERAL TERMS, CONDITIONS, AND INSTRUCTIONS  
IMPORTANT - READ CAREFULLY BEFORE SUBMITTING BID**

**1. SUBMISSION AND RECEIPT OF BIDS:**

- a. Sealed bids shall be received until, but no later than the specified time and date of opening as designated in the invitation. Late bids shall be rejected. **Bids, to include addenda or changes to a response, shall not be accepted via a FAX machine or by Internet E-mail.**
- b. In the event that Chesterfield County is closed due to inclement weather and/or emergency situations prior to or at the time set aside for the published bid opening, the bid opening date will default to the next open business day at the same time.
- c. All bids shall be signed on the Terms and Signature Sheet in order to be considered. Bids submitted without a signature shall be rejected. If the Bidder is a partnership or corporation, the Bidder shall show the title of the individual signing the bid, and if the individual is not an officer of the partnership or corporation, if requested, the Bidder shall submit proof that the individual has the authority to bind the partnership or corporation.
- d. **Only when specifically requested in the white pages of the Bid Documents**, shall each bid be accompanied by a bid bond with surety satisfactory to the County Attorney or a Cashier's or a Certified Check, made payable to the Treasurer, Chesterfield County, in an amount equal to five percent of the total bid price. In the event of default by the Bidder, the five percent deposit shall be and represent liquidated damages to the County. Bids received without a bid bond, when specifically requested, shall be rejected.
- e. Bids concerning separate bid invitations are not to be combined on the same form or placed in the same envelope. Bids submitted in violation of this provision may not be considered.
- f. Unless otherwise specified, Bidders are to use the bid form furnished by the County.
- g. No bid shall be altered or amended after the specified time for opening.

- 2. AMENDING BIDS:** Amending or withdrawing bids by a potential bidder prior to bid opening: A potential bidder may amend and/or withdraw a bid before the due date and time set for receipt of bids. All requests from a potential bidder to return their bid shall be in writing, addressed to the Purchasing Department, and signed by a person authorized to represent the person or firm that submitted the bid. The potential bidder may be contacted by telephone to verify the authorization of the return request and the signature involved if there is doubt as to the documents authenticity. **All amendments/alterations to the bid are to be initialed by an individual authorized to represent the person or firm that submitted the bid.**

**3. WITHDRAWAL OF BIDS:**

**Withdrawal: Construction** (*Code of Virginia 2.2-4330*)

- a. A bidder for a public construction contract, other than a contract for construction or maintenance of public highways, may withdraw of his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or unintentional omission of a quantity of work, labor, or material made directly in the compilation of a bid which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. If a bid contains both clerical and judgment mistakes, a bidder may withdraw his bid from consideration if the price bid would have been substantially lower than the other bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid which shall be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn.

**No bid may be withdrawn after the scheduled closing time for receipt of bids for sixty (60) calendar days, except as provided in Section 2.2-4330(A)(i), Code of Virginia, which states the bidder shall give notice in writing of his claim of right to withdraw his bid within two business days after the conclusion of the bid opening procedure. Any withdrawal request made to the Director of Purchasing must be accompanied by bidder's original work papers, or such request will be rejected.**

In order for work papers, documents and materials submitted pursuant to this section to be deemed a trade secret or proprietary information pursuant to *Code of Virginia*, subdivision F of 2.2-4342, a bidder must expressly invoke the aforementioned statute in the notice of withdrawal and specifically state the reasons why protection under 2.2-4342-F is necessary.

**Withdrawal: (other than construction)**

- b. A bidder for a public contract may request withdrawal of his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or unintentional omission of a quantity of work, labor, or material made directly in the compilation of the bid which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn. If a bid contains both clerical and judgment mistakes, a bidder may request withdrawal of his bid from consideration if the price bid would have been substantially lower than the other bids due solely to the clerical mistake, that was an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid which shall be clearly shown by objective evidence drawn from inspection of original work papers documents and materials used in the preparation of the bid sought to be withdrawn. In order for work papers, documents and materials submitted with the notice of withdrawal to be deemed a trade secret or proprietary information pursuant to *Code of Virginia*, subdivision F of 2.2-4342, a bidder must expressly invoke the aforementioned statute in the notice of withdrawal and specifically state the reasons why protection under 2.2-4342-F is necessary.

**4. DENIAL OF WITHDRAWAL OF BID: (Code of Virginia 2.2-4330 )**

If the County denies the withdrawal of a bid, it shall notify the bidder in writing stating the reasons for its decision and award the contract to such bidder at the bid price, provided such bidder is a responsible and responsive bidder.

**5. MISTAKES IN BIDS**

- a. Mistakes discovered following bid opening but prior to award: If there is a significant and obvious disparity between the prices of the lowest apparent responsive bidder and other bidders, the low bidder may be contacted by the purchasing authority to confirm the bid price. This does not relieve a bidder from the responsibility for the submission of a correct bid. If the bidder then alleges a mistake in the bid and can provide clear and convincing evidence that supports the existence of a clerical error to the satisfaction of the purchasing authority, the bid may be withdrawn only after approval by the County.
- b. Mistakes discovered after award: Bids containing mistakes by bidders shall not be withdrawn after award of a contract or issuance of a purchase order.

**6. PRICING:**

- a. Bidder warrants by virtue of bidding that prices, terms and conditions quoted in his bid will be firm for acceptance for a period of sixty (60) days from the date of bid opening unless otherwise stated by the County or Bidder.
- b. Prices should be stated in units of quantity as specified in the bid form. In case of error in extension of prices in the bid, the unit price shall govern.
- c. When a bid is for goods and/or services to be delivered on a one time only or staggered basis, only firm pricing shall be given consideration. General terms such as "price in effect at time of delivery" shall not be considered for award.

7. **PERFORMANCE AND PAYMENT BOND:** When requested in the bid, the County shall require the successful bidder to furnish a performance bond and labor and material payment bond with surety satisfactory to the County Attorney in the amount of the contract price at the time of or prior to execution of the contract. If bonds are requested in the bid, the successful Bidder shall pay the cost thereof; if not specified, the successful Bidder, when requested to do so, shall secure the bonds and the County shall pay the cost thereof.
8. **DELIVERY POINT AND TERMS:** All items shall be delivered F.O.B. destination, and freight, delivery costs, and incidental charges shall be included in the bid price(s). Failure to do so may be cause for not making award to a Bidder. The Bidder shall assume all liability and responsibility for the delivery of merchandise in good condition to the specified delivery location(s).
9. **CASH DISCOUNTS:** Cash discounts will be considered in determining the award. If a discount is offered, it is required that a minimum of fifteen (15) days be allowed for payment in order for the discount to be considered a factor in the evaluation of the bid.
10. **USE OF BRAND NAMES/SUBSTITUTIONS:** Unless otherwise specified in the invitation to bid, the name of a certain brand, make or manufacturer does not restrict bidders to the specific brand, make or manufacturer named; it conveys the general style, type, character, and quality desired, and any product which the County in its sole discretion determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted.

In requesting a proposed substitution, the bidder shall submit with the bid form the name of the manufacturer, model number, and complete specifications on the proposed substitution for evaluation by the County. The bidder shall submit, with the bid form, a detailed list of any deviations from these specifications, written or implied. The bidder assumes responsibility for all changes in the work required as a result of the proposed substitution, including any change not listed in the request, but determined by the County to be necessary at a later point of progress in the work.

It shall be understood that the burden of proof for an "equal" product shall be and remain the sole responsibility of the bidder. The County's failure to object to a manufacturer shall not constitute a waiver of any of the requirements of the contract documents, and all products furnished by the listed manufacturer must conform to such requirements. The County's decision of approval or disapproval of a proposed substitution shall be final.

11. **QUALITY:** All materials used for the manufacture or construction of any supplies, materials, or equipment covered by this bid shall be new. Unless otherwise specified in bid, products bid must be new, the latest model, the best quality, and the highest grade workmanship.
12. **ACCEPTANCE OF MATERIAL:** The goods and/or services delivered as a result of this bid shall remain the property of the seller until a physical inspection is made, and thereafter accepted to the satisfaction of the County. In the event the goods and/or services supplied to the County are found to be defective or do not conform to specifications, the County reserves the right to cancel the order upon notice (verbal or in writing) to the seller and return goods to seller at the seller's expense.
13. **DELIVERY:** In the appropriate space, the bidder shall state the time of proposed delivery or project completion in number of calendar days. Unless otherwise specified, quote the earliest delivery possible, as this may be considered a factor in making award. Delivery expressed in calendar days may be given preference over such general terms as "stock", "immediately", and "as soon as possible". As time will be of the essence for any orders placed as a result of this bid, the County reserves the right to cancel such orders, or any part thereof, without obligation, if delivery is not made at the time(s) specified on bid form.
14. **COPYRIGHTS OR PATENT RIGHTS:** The bidder certifies by submission of bid that there has been no violation of copyrights or patent rights in manufacturing, producing, or selling the product or services shipped or ordered as a result of this bid. The successful bidder shall, at his own expense, defend any and all actions or suits charging such infringement, and will save Chesterfield County, its officers, employees, and agents harmless from any and all liability, loss, or expense incurred by any such violation.
15. **SAMPLES:** Evidence in the form of samples may be requested if brand being quoted upon is other than as specified. The County reserves the right to request that such samples be furnished at the time of bid opening. The County also reserves the right to request samples after the date of bid opening. Requested samples shall be

furnished free of expense to the County and if not used in testing or destroyed, will, upon request at the time of submission of sample, be returned at the bidder's expense.

16. **TAXES:** Chesterfield County is exempt from payment of Federal Excise Tax and State and Local Sales and Use Tax on all tangible personal property purchased or leased by Chesterfield County for its use or consumption. Tax exemption certification will be furnished upon request. Sales tax, however, is paid by Chesterfield County on materials and supplies that are installed by a contractor and become a part of real property. Contractors are not exempt from paying taxes on these categories, as they are considered to be a cost of doing business and should be considered in pricing when preparing a bid.
17. **LICENSES, PERMITS, AND FEES:** All bids submitted shall have included in price the cost of any business and professional licenses, permits, or fees required by Chesterfield County or the Commonwealth of Virginia.
18. **SIGNED BID CONSIDERED AN OFFER:** This signed bid shall be considered an offer on the part of the bidder and shall be deemed accepted upon approval by Chesterfield County. In case of default by the successful bidder, or failure to deliver the goods and/or services ordered by the time specified, the County may terminate the purchase order and/or contract, and after due notice (verbal or in writing) may procure them from other sources and hold the defaulting bidder liable for any resulting additional cost.
19. **QUALITY EXPECTATION STATEMENT:** Chesterfield County, through its "Total Quality Improvement" initiative, is a recognized leader in providing quality products and services at the most effective cost possible. Therefore, the County fully expects, requires, and shall hold all Contractors, and all agents, staff, representatives, and subcontractors of the Contractor, responsible for, and accountable to, the highest quality standards of professional workmanship, products and services. In the spirit of the County's total quality improvement initiative, the Contractor shall be expected to become a member of the team and perform or provide all work, services and products with a target of "zero defects - zero rework".
20. **AWARD PHILOSOPHY:** Award will be made by the County to the lowest responsible bidder with the lowest responsive bid which is in substantial conformance with the terms, conditions, and specifications of the bid and is in conformance with the *Code of Chesterfield County* and the *Code of Virginia*.

Chesterfield County reserves the right to accept or reject any or all bids or parts of bids, to waive informalities, and to request rebids. The County also reserves the right to award the bid in a manner which the County deems will best serve its interest. Bids making exceptions to the terms and conditions included in this invitation may be considered, but preference may be given to bids with no exceptions taken. It further reserves the right to award the bid on a split order basis, lump sum, or individual item basis, or such combination as shall best serve the interest of the County, unless otherwise specified. The County may award a bid to a single contractor or to multiple contractors. It also reserves the right to increase or decrease quantities at the unit price bid.

21. **FACTORS OTHER THAN PRICE IN AWARD DECISION:** The following factors in addition to price (as they apply) shall be a consideration in the award decision:
  - a. The ability to provide references which may substantiate past work performance and experience in the type of work required for the contract. The lowest responsive bidder(s) may be required to furnish a contractor qualifications statement, to include references, prior to any such award. The County may contact all references furnished by bidders. The right is further reserved by the County to contact references other than, and/or in addition to, those furnished by the bidder. If, in the sole opinion of the County, a bidder is determined to be non responsible as a result of any investigation conducted by or for the County, award will not be made to that bidder.
  - b. The quality of performance/workmanship of previous contracts for goods and/or services delivered to or performed for the County.
  - c. The timely completion of previous contracts for services or the timely delivery of past orders for goods.
  - d. The sufficiency of financial resources and its impact on ability of the bidder to perform the contract or provide the services.

- e. The County reserves the right, at its option, to conduct on-site inspections of any bidder's facilities prior to award. The results of any such inspection will be considered by the County in determining bidder's capabilities of successfully administering the contract.
  - f. The ability and availability of the bidder to provide both quality and timely maintenance, service, and/or parts.
  - g. The resale value, life cycle costing and value analysis of a product.
  - h. The availability and capability of local and regional vendor support as it affects the quantity, quality, and timeliness of the goods and/or services.
  - i. Timely delivery of goods or timely completion of services as stated by bidder.
  - j. Substantial compliance or noncompliance with specifications set forth in bid as determined by the County.
  - k. Inventory capability as it relates to a particular bid.
  - l. Results of product testing.
22. **STATE REGISTRATION OF CONTRACTORS (IF APPLICABLE):** Attention is directed to Chapter 11, Title 54.1 of the *Code of Virginia* (Re: State registration of contractors when applicable), which requires that all bidders shall show evidence of the proper license under the provision of this chapter before such bid is considered.
23. **INTERPRETATION OF BID:** If any party contemplating the submission of a bid on this invitation is in doubt as to the true meaning of any part of the bid, the Purchasing Department should be contacted. Any change to the Invitation to Bid will be made only by written addendum mailed to prospective bidders at the addresses furnished for such purposes. The County will not be responsible for any changes except as noted through a written addendum.
24. **PROPRIETARY INFORMATION:** Section 2.2-4342-E of the *Code of Virginia* states: Trade secrets or proprietary information submitted by a bidder, offeror, or contractor in connection with a procurement transaction or prequalification application submitted pursuant to subsection B of 2.2-4317 shall not be subject to the Virginia Freedom of Information Act (2.2-3700 et seq.); however, the bidder, offeror, or contractor shall (i) invoke the protections of this section prior to or upon submission of the data or other materials, (ii) identify the data or other materials to be protected, and (iii) state the reasons why protection is necessary.
25. **GOVERNING LAW:** Any contract resulting from this Invitation to Bid shall be governed by the provisions hereof and by the laws of the Commonwealth of Virginia. Any dispute arising out of this Contract shall be resolved in the Courts of the Commonwealth of Virginia, in and for Chesterfield County.
26. **TIE BIDS:** In the case of a tie bid, the County may give preference to goods, services, and construction produced in the County or provided by persons, firms or corporations having principal places of business in the County. If such choice is not available, preference shall then be given to goods and services produced in the Commonwealth pursuant to Section 2.2-4324 of the Code of Virginia. If no County or Commonwealth choice is available, the tie shall be decided by lot.
27. **NONASSIGNMENT:** Parties to any resulting contract shall not assign the contract without written consent of the other(s). If any party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the contract.
28. **AUDIT OF VENDOR RECORDS:** The County reserves the right to audit all vendor records in contracts where payments are based on contractor's records of time, salaries, materials, or actual expense.
29. **NEGOTIATION:** If the bid from the lowest responsible bidder exceeds available funds, the County may negotiate with the low bidder to obtain a contract price within available funds.

30. **SECTION 2.2-4311 CODE OF VIRGINIA:** Every contract for goods or services over \$10,000 shall include the following provisions:
1. During the performance of this contract, the Contractor agrees as follows:
    - a. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
    - b. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, will state that such Contractor is an equal opportunity employer.
    - c. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
  2. The Contractor shall include the provisions of the foregoing paragraphs a, b, and c in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.
31. **MINORITY BIDDERS:** The Chesterfield County Purchasing Department encourages all businesses, including minority- and women-owned businesses to respond to all Invitations for Bid and Requests for Proposals, and if not already on the County's mailing list, to request application for inclusion on the list. Should you be interested, please contact this office at (804) 748-1617 and request an application.
32. **APPROPRIATION OF FUNDS:** The continuation of the terms, conditions, and provisions of any resulting contract beyond June 30 of any year, the end of the County's fiscal year, are subject to approval and ratification by the Chesterfield County Board of Supervisors and appropriation by them of the necessary money to fund said contract for each succeeding year.
33. **SCHOOL BOARD:** When goods and/or services are for the benefit of Chesterfield County Schools, the contract shall be entered into on behalf of the Chesterfield County School Board.
34. **REQUIREMENTS CONTRACTS:**
- a. Whenever a bid is sought seeking a source of supply for a requirements contract for goods and/or services, the quantities or usage shown are estimates only. No guarantee or warranty is given or implied by Chesterfield County as to any minimum or total amount that may or may not be purchased from any resulting contracts.
  - b. The County reserves the right, at its sole option, to renew the contract for consecutive terms.
  - c. The County reserves the right to award bids for requirements contracts based on the pricing of the initial term of the contract or any combination of initial and renewal terms.
  - d. The County may award a bid to a single contractor or to multiple contractors.
  - e. The County reserves the right not to renew the contract at the end of the initial term or any subsequent term.
  - f. The County reserves the right to terminate the contract upon written notice to the contractor(s).
  - g. In the event that a requirements contract is awarded for goods and/or services, the County reserves the right to bid individual bulk purchases if the County deems it will best serve their interest.
  - h. It is understood and agreed to between the parties in a resulting contract that Chesterfield County shall not be obligated to purchase or pay for materials under such contract unless and until they are ordered and delivered.

- i. Bids based on a firm price or those including a "downward escalator" clause for a requirements contract term may be given preference over lower ones bearing an "escalator" clause.
- j. The County has the right to extend this contract up to and not to exceed one hundred twenty (120) days following the last term of renewal.

### **35. DRUG FREE WORKPLACE**

During the performance of this contract, the contractor agrees to:

- a. Provide a drug-free workplace for the contractor's employees
- b. Post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition
- c. State in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace
- d. Include the provisions of the foregoing clauses in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific contract awarded to a contractor in accordance with this chapter, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

- 36. **ENVIRONMENTAL MANAGEMENT:** Vendor/Supplier/Contractor shall be responsible for complying with all federal, state, and local environmental regulations relating to transportation, handling, storage, spillage and any other aspect of providing the services specified herein, as applicable.
- 37. **SECTION 2.2-4343.1 CODE OF VIRGINIA:** Chesterfield County does not discriminate against faith-based organizations.

CHESTERFIELD COUNTY PURCHASING DEPARTMENT  
CHESTERFIELD, VIRGINIA 23832-0051  
(804) 748-1617

Bid Prepared By:

**Mary A. Ellis, CPPB  
Purchasing Officer**

Invitation To Bid Number:

**03-2295-8830**

May 6, 2003

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Sealed bids, subject to the specifications and conditions contained herein and attached hereto, will be received in the Purchasing Department, Chesterfield Administration Building, Room 402, until, but no later than **2:00 p.m.** Local Time Prevailing **May 29, 2003**, and then publicly opened and read aloud for **Elevator Renovations to One (1) Geared Traction Freight Elevator.**

If you are an individual with a disability and require a reasonable accommodation, please notify the Purchasing Department (804) 748-1617, three working days prior to need.

To be considered, your bid must be submitted on a copy of this Invitation to Bid. Bidders shall sign this form in the space provided on the Terms and Signature Sheet and return bid document to: Chesterfield County Purchasing Department, Administration Building - Room 402 - Fourth Floor, 9901 Lori Road, P.O. Box 51, Chesterfield, VA 23832-0051. **Mark outside of your envelope with Invitation for Bid #03-2295-8830 and opening date of bid.**

**Bids, to include addenda or changes to a response, shall not be accepted via Fax machine or by Internet E-mail.**

Time is of the essence and any bid received after the announced time and date for submittal, whether by mail or otherwise, will be rejected. The time of receipt shall be determined by the time clock stamp in the Purchasing Department. Bidders are responsible for ensuring that their bids are stamped by Purchasing Department personnel before the deadline indicated. **Late bids received will be so noted in the bid file in order that the vendor's name will not be removed from the subject commodity/service list.**

Nothing herein is intended to exclude any responsible vendor, his product or service or in any way restrain or restrict competition. On the contrary, all responsible vendors are encouraged to bid and their bids are solicited.

For information pertaining to the award on this procurement transaction, bidders and/or offerors may access public notification electronically at [www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp](http://www.co.chesterfield.va.us/ManagementServices/Purchasing/purchase.asp).

**COMMITMENT TO DIVERSITY AND CHESTERFIELD BUSINESSES**

Chesterfield County is a rapidly growing progressive community consisting of an increasingly diverse population. This diversity provides for a dynamic and robust community that promotes growth. Chesterfield County believes that all of its citizens should benefit from this economic growth without regard to race, color, religion or economic status.

The county is committed to increasing the opportunities for participation of minority business enterprises, woman-owned businesses and businesses located in Chesterfield County to ensure diversity in its procurement and contract activities. These businesses are encouraged to respond to all Invitations for Bids and Requests for Proposals. In addition, the county strongly encourages each contractor and/or supplier with which the county contracts to actively solicit minority business enterprises, woman-owned businesses and businesses located in the county as subcontractors/suppliers for their projects.

Upon award/renewal of the contract, the successful bidder/offeror shall furnish data requested on the Certification of Subcontractor/Supplier Activity form included in this IFB/RFP document. This information will enable the county to document the dollar level of activity and measure the success of its purchasing and contracting efforts in this endeavor.

**DEFINITIONS:**

For purposes of Chesterfield County's classification and reporting program, in cooperation with the Virginia Department of Minority Business Enterprise, the following definitions apply:

Woman-Owned Business (WOB) - a business concern that is majority owned by a woman who also controls and operates the business. In this context, "control" means exercising the power to make policy decisions, and "operate" means being actively involved in the day-to-day management.

Minority Business Enterprise (MBE) - a business enterprise that is owned and controlled by one or more socially and economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: African Americans, Asian Americans, Native Americans, Eskimos and Aleuts. (Reference: 2.1-6432.1 of the *Code of Virginia*)

Chesterfield Business (CB) - any private business enterprise, located within the jurisdictional boundaries of Chesterfield County.

Minority - a person who is a citizen of the United States or a legal resident alien and who satisfies one or more of the following:

Asian Americans - all person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent or the Pacific Islands including but not limited to Japan, China, Vietnam, Korea, Samoa, Laos, Cambodia, Taiwan, northern Marinas, the Philippines, U. S. territory of the Pacific, India, Pakistan, Bangladesh and Srilanka and who are regarded as such by the community of which these persons claim to be a part.

African Americans - all persons having origins in any of the original peoples of Africa and who are regarded as such by the community of which these persons claim to be a part.

Hispanic Americans - all persons having origins in any of the Spanish-speaking peoples of Mexico, South or Central American, or the Caribbean Islands or other Spanish or Portuguese cultures and who are regarded as such by the community of which these persons claim to be a part.

Native Americans - all persons having origins in any of the original peoples of North America and who are regarded as such by the community of which these persons claim to be a part or who are recognized by a tribal organization.

Eskimos and Aleuts - all persons having origins in any part of Northern Canada, Greenland, Alaska, and Eastern Siberia and who are regarded as such in the community of which these persons claim to be a part.

Members of other groups - all other individuals found to be socially and economically disadvantaged by the United States Small Business Administration under Section 8(a) of the Small Business Act (15USC637)[a]. (VR486-01-02; September 9, 1992).

CERTIFICATION OF SUBCONTRACTOR/SUPPLIER ACTIVITY  
 MINORITY BUSINESS ENTERPRISES, WOMAN-OWNED BUSINESSES  
 AND CHESTERFIELD BUSINESSES

Contractors shall furnish the information requested below regarding subcontractor(s) or supplier(s).

**(This form will be sent by the Purchasing Department to the contractor for completion at the time of award/renewal, as appropriate.)**

Name and Address of Subcontractor/Supplier	(T) MBE	(T) WOB	(T) CB	Commodity or Service	Dollar Amount



If a continuation of this list of subcontractors/suppliers is needed, please attach additional pages to this form.

I have no MBE, WOB or CB applicable to this contract \_\_\_\_\_(T)

Contractor hereby certifies that the above information is correct.

Complete Legal Name of Firm: \_\_\_\_\_ Date: \_\_\_\_\_

### DEFINITIONS

- A. **BID** - The proposal submitted by a Bidder on the Bid Form consistent with the Instructions to Bidders, to complete the Work for a specified sum of money and within a specified period of time.
- B. **BIDDER** - An individual, firm, partnership or corporation qualified in accordance with the Virginia Public Procurement Act, and approved by the Owner, that submits a Bid for the Work, either directly or through a duly authorized representative.
- C. **BID BOND** - The bond, with corporate surety, supplied by a Bidder to the Owner, and in all respects satisfactory to the Owner's Attorney, that guarantees the Bidder's compliance with the Contract Documents. A certified check or cashiers check payable to the Owner, delivered with the Bid, may also constitute a Bid Bond.
- D. **BID DOCUMENTS** - All Contract Documents that the Owner or Engineer provides to potential Bidders before the time established for the submission of Bids.
- E. **CHANGE ORDER** - An amendment or modification to the Contract properly executed by authorized representatives of the Owner and the Contractor on the form provided in the Contract Documents.
- F. **COMPLETION OF THE WORK** - The event that occurs when (1) the Work has been completed, successfully tested and approved in accordance with the Contract Documents, (2) all submittals required by the Contract Documents (including Operation and Maintenance manuals) have been made, and (3) all Punch List items and restoration Work required by the Contract Documents has been completed.
- G. **CONTRACT BONDS** - The Performance Bond and Labor and Material Payment Bond executed by the Contractor, with corporate surety and otherwise acceptable in all respects to the Owner's Attorney.
- H. **CONTRACT DOCUMENTS** - The Notice to Bidders, Advertisement, General Terms, Conditions and Instructions, Definitions, Bid Form, Bid Bond, Bond Requirements, Contract, Special Conditions, Supplementary General Conditions, Insurance Provisions (including Instructions Regarding Insurance Certificates), Labor and material payment Bond, Performance Bond, Notice of Award, Notice to Proceed, Escrow Agreement (when used), Change Orders, Drawings, Specifications and Addenda, Special Provisions and any other document incorporated by reference into one of these documents.
- I. **CONTRACT PRICE** - The amount of money which the Owner and the Contractor have agreed that the Owner will pay to the Contractor for performing and completing the Work.
- J. **CONTRACTOR** - The party who has contracted to perform and complete the Work.
- K. **ENGINEER** - The Consulting Engineer who has been designated by the County as Engineer for the project, and the Engineer's authorized agents, inspectors or representatives.
- L. **FINAL ACCEPTANCE** - The event that occurs when the Engineer issues to the County or the County issues to the Contractor a written statement that the Contractor has completely performed all Punch List items, has made all necessary submittals to the Owner and/or Engineer and has satisfied all of the Contractor's obligations under the Contract Documents.

- M. **FINAL INSPECTION** - The inspection conducted by the Owner or Engineer to determine what items of the Work must be completed by the Contractor in order for Completion of the Work to occur. After the Final Inspection is conducted, the Owner or Engineer shall provide the Contractor with a Punch List that the Contractor must complete in order for Completion of the Work to occur. The Owner may perform the Final Inspection instead of, or together with, the Engineer.
- N. **FINAL PAYMENT** - Payment by the Owner to the Contractor after Completion of the Work so that the Contractor has received all payments due him under the terms of the contract documents for performing and completing the Work.
- O. **INSPECTOR** - The person appointed by the Owner to carry out instructions given by the Owner and to inspect the Work performed and the materials supplied by the Contractor.
- P. **OWNER** - Chesterfield County, Virginia, a political subdivision of the Commonwealth of Virginia, and its duly authorized officials, agents and employees.
- Q. **PLANS** - All drawings or reproductions of drawings that depict or relate to the Work. A pictorial representation of the Work or some portion of the Work, showing design, location and dimensions.
- R. **PUNCH LIST** - The list provided to the Contractor by the Engineer or Owner after Final Inspection that includes all items that the Contractor must complete in order for Completion of the Work to occur.
- S. **SPECIFICATIONS** - The directions, provisions and requirements contained in the Contract Documents relating to the method or manner of performing the Work, or to the quantity or quality of materials to be furnished under the Contract Documents.
- T. **SUBCONTRACTOR** - Any individual, firm or corporations having a direct contract with the Contractor for the performance of any part of the Work.
- U. **TIME OF COMPLETION** - The time agreed upon by the Owner and the Contractor in the Contract by which the Contractor is required to accomplish Completion of the Work, plus any extensions of time granted to the Contractor by the Owner pursuant to the Contract Documents.
- V. **THE WORK** - The whole and any part of the construction, labor, materials, equipment, incidentals or services necessary for the Contractor to achieve Completion of the Work as required by the Contract Documents.

SPECIAL BID CONDITIONS

**SCOPE OF WORK**

This Invitation for Bid is to furnish all labor and materials to perform elevator renovations for one (1) geared traction freight elevator #1 for the Chesterfield County Utilities Department, Addison-Evans Water Production and Laboratory Facility (Swift Creek Water Treatment Plant), 13400 Hull Street Road, Midlothian, VA 23112.

Responsive and responsible bidders shall provide a base bid for providing a new microprocessor controller, VVF drive, landing control system, car enclosure modifications, hoistway switches, car and hall operating devices and complete wiring in accordance with the Specification Section 14210, Pages 20 through 46, contained herein.

In addition, provide a bid for Additive Design Build, Bid Item No. 1 – Preparatory Work, not included in the base bid.

**PRE-BID CONFERENCE**

A Pre-Bid Conference will be held on May 14, 2003 at 10:00 a.m.. The conference will be held at the site, Addison-Evans Water Production and Laboratory Facility (Swift Creek Water Treatment Plant), 13400 Hull Street Road, Midlothian, VA 23112, Attendance is encouraged; however, it is not mandatory.

**SITE VISITS**

Prior to visiting the site of the proposed work, all bidders shall contact George Duval or Danny Gaskill, at (804) 744-1360, between the hours of 9:00 a.m. to 4:00 p.m., Monday through Thursday.

**GUARANTEE**

All materials and workmanship shall be guaranteed for a period of twelve (12) months after final acceptance by the County and repairs necessary shall be made by the contractor at his expense.

**BONDS**

Each bid shall be accompanied by a bid bond from a Surety company satisfactory to the County Attorney or a Cashier's or a Certified Check, made payable to: TREASURER, CHESTERFIELD COUNTY, in an amount equal to five percent of the total bid price.

A Labor and Material Payment Bond and a Performance Bond, each in the amount of 100% of the Contract Price, with a corporate surety authorized to do business in the State of Virginia and otherwise acceptable in all respects to the Owner's Attorney will be required for the faithful performance of the contract. (A sample of the contract is included for review).

Attorneys-in-fact who sign Bid Bonds, Labor and Material Payment Bonds and Performance bonds must file with each bond a certified and effective dated copy of their power of attorney. Each Bid Bond and the accompanying power of attorney should bear the same date. Each Labor and Material Payment Bond and each Performance Bond and the accompanying power of attorney should bear the same date as the date of the Contract.

The party to whom the Contract is awarded will be required to execute the Contract and obtain the Labor and Material Payment Bond and the Performance bond within fifteen calendar days from the date when the Notice of Award together with the Contract is delivered to the Bidder for execution. In case of the failure of the Bidder to execute the Contract within the prescribed time, the Owner may, at his option consider the Bidder in default, in which case the Bid Bond accompanying the Bid shall become the property of the Owner.

### **RESPONSIBILITY OF BIDDER**

The Bidder shall make a careful examination of the project site, shall familiarize himself with existing conditions, and shall satisfy himself as to the quantity and quality of materials and workmanship required for the Work. He shall carefully and thoroughly examine the Contract Documents before submitting a Bid.

LICENSES, PERMITS, AND FEES: All bids submitted shall have included in price the cost of any business and professional licenses, permits, or fees required by Chesterfield County or the Commonwealth of Virginia.

Request for interpretation of plans and specifications should be addressed to: Mary A. Ellis, Purchasing Officer, (804) 748-1913 to be given consideration and should be received at least five days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instruction will be in the form of written addenda to the specifications which, if issued, will be mailed or faxed to all prospective bidders (at the respective addresses or fax numbers furnished for such purposes), not later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addenda so issued shall become part of the contract documents.

The submission of a Bid shall constitute a warranty by the bidder that he has complied with the requirements of this paragraph. The bidder is bound by his bid and his bid reflects an affirmative representation that he has examined the project thoroughly.

### **DATE OF COMMENCEMENT AND COMPLETION**

The date of commencement shall be established in a written Notice To Proceed issued by the Owner.

### **ACCESS TO COUNTY PROPERTY**

Access to the County's property shall be as follows: Contractors shall contact George Duvall or Danny Gaskill, at (804) 744-1360, between the hours of 9:00 a.m. to 4:00 p.m., prior to visiting the site.

## **INSURANCE**

**An original copy of a Certificate of Insurance shall be required and must be furnished by the successful contractor during execution of the contract. The Certificate of Insurance does not need to accompany the bid.**

The contractor shall purchase and maintain in force, at his own expense, such insurance as will protect him and the County from claims which may arise out of or result from the Contractor's execution of the work, whether such execution be by himself, his employees, agents, subcontractors, or by anyone for whose acts any of them may be liable. The insurance coverage shall be such as to fully protect the Owner, the Engineer (if applicable) and the general public from any and all claims for injury and damage resulting by any actions on the part of the contractor or his forces as enumerated above. The Contractor shall furnish a copy of an original Certificate of Insurance, **naming Chesterfield County as an additional insured.** Should any of the policies be canceled before the expiration date, the issuing company will mail 30 days written notice to the certificate holder. The Contractor shall furnish insurance in satisfactory limits, and on forms and of companies which are acceptable to the Owner's Attorney and/or Risk Management and shall require and show evidence of insurance coverages on behalf of any subcontractors (if applicable), before entering into any agreement to sublet any part of the work to be done under this Contract.

The following insurance requirements are the minimum that will be acceptable:

1. Worker's Compensation Insurance with statutory limits and Employers' Liability Insurance of \$500,000 for one accident or aggregate disease.
2. Commercial General Liability - \$1,000,000 Each Occurrence Combined Single Limit - Including coverage for XC and U hazards
3. Comprehensive Automobile Liability - \$1,000,000 Each Occurrence Combined Single Limit
4. Umbrella Liability Insurance - \$2,000,000 Each Occurrence

All insurance policies under coverages 2 and 4 above shall name the Owner, as additional insured.

The Contractor shall be responsible for maintaining current certificates of insurance on file with the Owner, and the Insurance Company shall be responsible for notifying the Owner thirty (30) days prior to the expiration, cancellation, non-renewal, or material change in the coverage.

The Contractor shall be responsible for continuing in force completed operations, bodily injury and property damage coverage for a minimum of two (2) years after completion and acceptance of the work.

For projects with a construction cost of less than \$50,000, Builder's Risk coverage for the full project value shall be paid for and provided by the Contractor and be subject to approval by the Office of Risk Management. This coverage shall be provided by a company with an A.M. Best rating of no less than B+. The County shall be named as an additional insured.

For projects with a construction cost of more than \$50,000, the Builder's Risk coverage will be provided by the County, however, the Contractor shall be responsible for the first \$10,000 of any claim. The County's Builder's Risk coverage is \$50,000 self insured retention.

**INSTRUCTIONS REGARDING INSURANCE CERTIFICATES**

The Contractor and his insurance company should carefully review the insurance requirements applicable to this job. All requirements herein must be met before the County will execute the contract. In particular, we would call your attention to the following:

1. Please note that the Insurance Certificate must state that the Commercial General Liability and the Umbrella Liability Insurance Policies name **Chesterfield County** as additionally insured. This requirement may be met by placing the following language on the Certificate. Many Certificates have a space headed "**DESCRIPTION**" where the language may be inserted as follows:

**Chesterfield County is additionally insured or that Chesterfield County is additionally insured with respects to General Liability; and/or Umbrella Liability policies.**

2. The Insurance Certificate must also contain the required statement concerning notice of cancellation or other change in coverage. The statement used on some Certificate forms is not acceptable. The statement which is required by the contract documents reads as follows:

"Such certificate shall provide that in the event of the cancellation of the policy or policies listed on such certificate, not less than 30 days notice in writing shall be given to the County.

**NOTE: The cancellation clause in the Insurance Certificate shall be modified by striking the words 'endeavor to' in the second line and by striking the clause reading 'but failure to mail such notice shall impose no obligation or liability of any kind upon the company'."**

3. The Certificate Holder should be listed as:

Chesterfield County  
c/o Purchasing Department  
P. O. Box 51  
Chesterfield, VA 23832-0051  
IFB/RFP No. \_\_\_\_\_

4. Certificate of Insurance must have an original signature.

SUPPLEMENTARY GENERAL CONDITIONS

1. QUALIFICATIONS OF BIDDERS

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

2. SUBMITTALS

If requested, the Bidder shall submit the following information to the County within seven days of notification of selection for the award of a Contract for the Work:

- a. a designation of the Work to be performed by the Bidder with his own forces;
- b. the proprietary names and the suppliers of principal items or systems of materials and equipment proposed for the work;
- c. a list of names of the Subcontractors or other persons or entities proposed for the principal portions of the Work.

Prior to the award of the Contract, the County will notify the Bidder in writing if the Owner, after due investigation, has reasonable objection to any such proposed person or entity. If the Owner has reasonable objection to any such proposed person or entity, the Bidder may submit an acceptable substitute person or entity.

The Owner may, at his discretion, accept the substitution, or he may disqualify the Bidder. In the event of disqualification under this Sub-paragraph, bid security will not be forfeited.

Persons and entities proposed by the Bidder and to whom the Owner has made no reasonable objection under the provisions of Sub-paragraph (c) must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner.

3. PRE-CONSTRUCTION CONFERENCE

A pre-construction conference to include representatives of the Owner, the Engineer (if applicable), and the Contractor shall be mandatory prior to start of construction unless waived by the Owner. Pre-construction conference shall be scheduled at least three (3) days prior to start of construction.

4. SUPERVISION AND CONSTRUCTION PROCEDURES

The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.

The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.

5. CLEANING UP

The Contractor at all times shall keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work, he shall remove all his waste materials and rubbish from and about the Project as well as all his tools, construction equipment, machinery and surplus materials.

6. MATERIALS AND WORKMANSHIP

The Contract Documents describe the character and features of the materials and workmanship required to perform the Work. The Contract Documents require first class work and materials in all particulars. It is understood that the contract includes any and all work that may be necessary to connect the work done with the adjoining work in a proper and workmanlike manner.

The Owner reserves the right to employ an independent testing laboratory to conduct tests of materials, etc. as the Owner may deem necessary to assure complete compliance with the requirements of the specifications. The Contractor shall offer full cooperation with personnel in the employ of the Owner in making these tests.

7. NO DEVIATION FROM CONTRACT DOCUMENTS BY THE CONTRACTOR

In performing the Work, the Contractor shall not deviate from the Contract Documents without the written consent of the Owner. If the Contractor does deviate from the Contract, he shall correct the error at his expense in a manner satisfactory to the Owner.

8. INTERPRETATION OF CONTRACT DOCUMENTS

In case of discrepancy between or among Contract Documents, the Owner shall make such interpretations as may be deemed necessary for the fulfillment of the intent of the Contract Documents as construed by him and his decision shall be final.

The Contractor shall verify all figures on the Plans and will be responsible for the proper coordination of all dimensions as well as the different parts of the Work.

9. OTHER PLANS AND WORKING DRAWINGS (SHOP DRAWINGS)

Such information as is necessary to give a comprehensive idea of the construction contemplated, are shown on the Plans. Contractor shall submit to the Owner for his approval such additional detailed shop or working drawings as may be required for the construction of any part of the work. Pending the approval of such drawings, any work done or materials ordered shall be at the risk of the Contractor.

10. DISCREPANCIES

The Contractor shall immediately report to the Owner, in writing, any discrepancies found between the Contract Documents and site conditions or any inconsistencies or ambiguities in the Contract Documents. The Owner shall promptly correct such inconsistencies or

ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

11. FINAL INSPECTION

At time of final inspection, the Contractor, if requested, shall provide a knowledgeable representative to assist in the inspection of the completed installation for conformance with specifications. The Owner or Engineer shall prepare a Punch List. Any deficiencies shall be promptly and permanently corrected prior to final acceptance of the work, and shall be the full responsibility of the Contractor.

12. PAYMENT

If the Contractor performs, properly, all of the obligations of the Contract Documents, the Owner shall pay the Contractor for the performance of the Work in the manner and within the time specified in the Contract Documents.

13. MONTHLY ESTIMATES AND RETAINAGE

On the 20th day of each month, or at any other regular time agreed upon by the Owner and Contractor, the Contractor shall prepare and submit to the Owner a monthly estimate for Partial Payment. The monthly estimate shall cover items of work for which the Contractor is entitled to be paid since the last previous monthly estimate was submitted, including (1) the value of the Work done, (2) major items of equipment or materials delivered to the site of the project to be installed by the Contractor, as substantiated by submitted invoices and as approved by the inspector, and (3) materials incorporated into the Work.

The Owner shall pay to the Contractor all sums due under the monthly estimate less five percent (5%) retainage on or before the 15th day of the month following the submission of the monthly estimate, unless the Owner asserts a right to withhold some or all of the payment under the provisions of the Contract Documents.

The Contractor will be paid for materials delivered to and stored on the job site. Payment will be for actual cost of materials as evidenced by receipted invoices, less five percent (5%) retainage. The contractor shall make a separate accounting of these materials and shall submit an accounting of them, with four (4) copies, along with the monthly estimate for partial payment.

14. PARTIAL PAYMENT NO WAIVER OF RIGHTS

Partial payments made under this Contract by the Owner are not evidence of the proper performance by the Contractor either in whole or in part, and no payment made by the Owner shall be construed to be an acceptance of defective or improper work. No act of the Owner or the Engineer or the representative of either of them in superintending or directing the Work, no failure to disapprove or reject any material used in the Work, and no extension of time for the completion of the Work shall be construed as acceptance of the Work either in whole or in part. Acceptance of the work by the Owner shall occur only upon Final Payment by the Owner.

15. TERMINATION FOR BREACH OF NON-PERFORMANCE

If the Contractor fails to perform the Work promptly and diligently, or if the Contractor breaches the Contract in any other way, the Owner may:

- 1) after providing the contractor with fifteen (15) days written notice, supply any workmen, equipment or materials necessary to ensure that the Work is performed promptly and diligently. The Owner may deduct the cost of supplying additional workmen, equipment or materials from payments due to the Contractor;
- 2) terminate the Contract, enter upon the premises, take possession of all equipment, materials or appurtenances, and employ any person or persons to finish the Work.

In case of termination of the Contract by the Owner pursuant to this paragraph, the Contractor shall not be entitled to receive any further payment from the Owner until Completion of the Work has occurred. After completion of the Work, the Owner shall pay to the Contractor the amount of the unpaid balance due to the contractor at the time the Contract was terminated minus the cost incurred by the Owner to complete the Work. If the cost incurred by the Owner to complete the Work exceeds the unpaid balance due to the Contractor, the contractor shall be due no money from the Owner and, instead, the Contractor shall pay to the Owner the difference between the unpaid balance due and the Owner's cost to complete the Work.

16. WAIVER OF ONE BREACH NOT WAIVER OF OTHERS

No waiver by the Owner or its agents or employees of any breach of this Contract by the Contractor shall be construed as a waiver of any other or subsequent breach of the Contract by the Contractor. All remedies provided by this Contract are cumulative, and in addition to each and every other remedy under the law.

BID FORM

**BASIS OF AWARD:** The award of this bid will be on the base bid and accepted additive: Bid Item #1.

To: **Chesterfield County**

For: Furnishing all labor and materials necessary to complete Renovations to One (1) Geared Traction Freight Elevator located at the Addison-Evans Water Production and Laboratory Facility, (Swift Creek Water Treatment Plant), 13400 Hull Street Road, Midlothian, VA 23112, in accordance with bid specifications.

The undersigned Bidder has carefully examined the site of work, General Terms and Conditions, Special Bid Conditions, Supplementary General Conditions, Drawings and Technical Specifications, for the construction of the above named project, and in compliance with the Advertisement dated May 6, 2003, will provide all necessary machinery, tools, apparatus, and other means of construction, and do all the work and furnish all the material called for by said Specifications, in the manner prescribed therein, and will complete the Contract within \_\_\_\_ consecutive calendar days.

Did Bidder Attend the Non-Mandatory Pre-Bid Conference?      Yes \_\_\_\_\_ No \_\_\_\_\_

Did Bidder Visit the Site?      Yes \_\_\_\_\_ No \_\_\_\_\_

Base Bid:      \$ \_\_\_\_\_

Additive - Bid Item #1: \$ \_\_\_\_\_

(NOTE: B.1 Preparatory Work – Additive Design Build for elevator #1, as indicated in the Specifications.)

Total Bid:      \$ \_\_\_\_\_

Bidders shall indicate the controller model number and manufacturer in the space provided.

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Manufacturer and Model Number

Bidders shall provide unit prices for the following: **(NOTE: DO NOT include in proposed cost)**

1. Authorized Work Outside Scope of Contract

Regular time rate per hour for adjustor      \$ \_\_\_\_\_

Regular time rate per hour for mechanic      \$ \_\_\_\_\_

Regular time rate per hour for helper      \$ \_\_\_\_\_

Overtime rate per hour for adjustor      \$ \_\_\_\_\_

Overtime rate per hour for mechanic      \$ \_\_\_\_\_

Overtime rate per hour for helper      \$ \_\_\_\_\_

2. Contract Work (Maintenance/Temporary Service)

Premium time rate per hour for adjustor \$ \_\_\_\_\_

Premium time rate per hour for mechanic \$ \_\_\_\_\_

Premium time rate per hour for helper \$ \_\_\_\_\_

ADDENDUM INFORMATION (If Applicable)

Receipt of the addendum listed below is acknowledged and the proposals incorporate all requirements of this addendum:

\_\_\_\_\_ Dated \_\_\_\_\_

\_\_\_\_\_ Dated \_\_\_\_\_

\_\_\_\_\_ Dated \_\_\_\_\_

Accompanying this Bid is a Bid Bond/Certified/Cashier's Check in the amount of \_\_\_\_\_ payable to Treasurer, Chesterfield County, Virginia, which is to be forfeited to the extent necessary to make up the difference between the Bid and the second low bid, if the undersigned shall fail to execute the Contract and furnish satisfactory Performance and Labor and Material Payment Bonds under the conditions and within the time specified. If the Bid Bond or guarantee is not sufficient to make up the difference between the Bid and second low bid, together with any consequential damages, the undersigned Bidder agrees to pay the Owner any losses in excess of the bond or guarantee.

The undersigned Bidder agrees to begin the work not later than \_\_\_\_\_(\_\_\_\_) calendar days after the date specified in the Notice to Proceed and to prosecute the work in such manner as to complete it within the time limit as set forth above.

If the bid from the lowest responsible bidder exceeds available funds, the County may negotiate with the low bidder to obtain a contract price within available funds.

CONTRACTOR REGISTRATION

If a contract for construction, removal, repair or improvement of a building or other real property is for Seventy Thousand Dollars (\$70,000) or more, or if the total value of all such contracts undertaken by a Bidder within any twelve-month period is Five Hundred Thousand Dollars (\$500,000) or more, the Bidder is required under Title 54.1, *Code of Virginia* (1950), as amended, to be licensed by the State Board of Contractors as a "CLASS A CONTRACTOR". If such a contract is for Seventy-five Hundred Dollars (\$7,500) or more (One Thousand Dollars [\$1,000] for electrical, plumbing and HVAC work) but less than Seventy Thousand Dollars (\$70,000), the Bidder is required to be licensed as a "CLASS B CONTRACTOR". If such a contract is for One Thousand Dollars (\$1,000) or more but less than Seventy-five Hundred Dollars (\$7,500) and is not for electrical, plumbing and HVAC work, the Bidder is required to be licensed as a "CLASS C CONTRACTOR". The Contractor license shall have the appropriate specialty classification that is predominant for the respective work. The Bidder shall indicate in the space provided whichever of the following notations is appropriate, inserting his contractor license number and specialty.

Licensed Class A Virginia Contractor No. \_\_\_\_\_

Licensed Class B Virginia Contractor No. \_\_\_\_\_

Licensed Class C Virginia Contractor No. \_\_\_\_\_

Specialty: \_\_\_\_\_

If the Bidder shall fail to provide this information on his bid or on the envelope containing the bid and shall fail to promptly provide said Contractor license number to the County in writing when requested to do so before or after the opening of Bids, he shall be deemed to be in violation of Section 54.1-1115 of the *Code of Virginia* (1950), as amended, and his bid will not be considered.

If a Bidder shall fail to obtain the required license prior to submission of his bid, the bid shall not be considered.

**BIDDER'S DATA SHEET**  
**TO BE COMPLETED AND SUBMITTED WITH BID**

QUALIFICATIONS: Bidders shall have the capability and capacity in all respects to fulfill the contractual requirements to the satisfaction of the County.

Indicate the length of time you have been in business as a company providing the type of goods required for this contract.

\_\_\_\_\_ years    \_\_\_\_\_ months

Provide a list of three (3) customers to whom the bidder has sold the product bid during the past three (3) years.

Name, Address, Phone Number and Contact Person

- 1. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- 2. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
- 3. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**TERMS AND SIGNATURE SHEET**

CERTIFICATION OF NON-COLLUSION

My signature below certifies that the accompanying Bid is not the result of or affected by, any act of collusion with another person or company engaged in the same line of business or commerce, or any act of fraud punishable under Title 18.2, Chapter 12, Article 1.1 of the *Code of Virginia*, 1950, as amended. Furthermore, I understand that fraudulent and collusive bidding is a crime under the Virginia Governmental Frauds Act, the Virginia Government Bid Rigging Act, the Virginia Anti-Trust Act, and Federal Law and can result in fines, prison sentences, and civil damage awards.

I agree to abide by all conditions of this Bid and certify that I am authorized to sign this Bid.

If a discount is offered, it is required that a minimum of fifteen (15) days be allowed for payment in order for the discount to be considered a factor in the evaluation of this bid. Our terms are \_\_\_\_\_. If this blank is not filled in, it is understood that a discount of 2% is allowed for payment by the 20th day after receipt of invoice.

**Complete Legal Name of Firm:** \_\_\_\_\_

**Order From Address:** \_\_\_\_\_  
\_\_\_\_\_

**Remit To Address:** \_\_\_\_\_  
\_\_\_\_\_

**Signature:** \_\_\_\_\_

**Name (type/print):** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Fed ID No.:** \_\_\_\_\_ **Phone (\_\_\_\_)** \_\_\_\_\_ **Fax (\_\_\_\_)** \_\_\_\_\_

We hereby provide the following information to Chesterfield County regarding our business. We understand that it is provided for statistical purposes only and all firms submitting bids will receive equal consideration.

Minority Business Enterprise: Yes \_\_\_\_\_ No \_\_\_\_\_

Woman-Owned Business: Yes \_\_\_\_\_ No \_\_\_\_\_

Chesterfield Business: Yes \_\_\_\_\_ No \_\_\_\_\_

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including the General Conditions and other Division 01 Specification Sections, apply to this Section.

### 1.2 SUMMARY

- A. This Section includes the following:

1. Scope of Work : Modernize freight elevator #1
2. Type of Machines : Geared, reuse and modify for VVVF operation
3. Load (Capacity) : New 3500 pounds
4. Car Speed : Existing 75 feet per minute
5. Operation : New Simplex Collective
6. Control : New microprocessor w/VVVF drive
7. Rise : 23' - 0"
8. No. of Openings : 3 at front of hoistway + 1 LD rear opening
9. Number of Stops : 4
10. Maintenance : From award of contract until one year after substantial completion
11. Power Supply : 480 volts, 3 phase, 60 hertz
12. Lighting Supply : 120 volts, 1 phase, 60 hertz
13. Car Enclosure : Modify as specified
14. Car Inside Dim. : 5' - 3 1/2" x 6' - 4" front to back, inside clear
15. Height Under Top : 8'-0" ±
16. Type of Doors : Existing, provide new two-speed hoistway doors at loading dock level; retain all other existing hoistway doors and frames, new door hardware as specified
17. Door Opening Size : Existing 4' - 0" wide x 7' - 0" high
18. Car Fixtures : New car operating panels with integral emergency lighting, "handsfree" phones, digital car position indicator and double stroke chime car lanterns

19. Hall Fixtures : New hall buttons. Provide new floor 2 lobby position and direction indicator.

B. Preparatory work not included in this Section – Additive Design Build Bid Item No. 1

1. Remove existing 480 volt 3-phase non-fused mainline disconnect switch and provide new fused disconnect switch with padlocking attachments with individual enclosure, panel board, disconnect switch, green grounding conductor in accordance with 10 H. P. 135-98 amp. existing motor and new VVVF drive requirements. Provide a dedicated 20A, 120 volt car light disconnect switch with padlocking attachments. Provide a new fire alarm system for elevator's firefighters' service recall system, including a smoke detector in machine room and each lobby, excluding LD rear outside opening. Convert machine room and pit (except sump receptacle) electrical receptacle to GFI type. Provide flush steel plate cover for sump hole in pit. (Owner to remove flexible drain line and provide permanent piping for pit sump pump drain line.) Electrical equipment shall be installed in accordance with applicable VUSBC, IEEE, ASME A17.1 and 1996 National Electric Code (NEC) and applicable state and municipal laws and codes covering each class of work. All equipment and material for which there are UL standards shall bear UL or equivalent label of approval.

C. Preparatory work included in this Section

1. Contractor shall submit proposed machine room equipment heat release data for approval within six weeks of notice of contract award to allow coordination of mechanical work for machine room cooling being provided by Owner.
2. Where hoistway walls or floors are penetrated by elevator fixture boxes, the hoistway wall penetrations are to be designed and constructed to provide protection and maintain the fire-resistive integrity of the hoistway walls.
3. Submit detailed drawings for approval of any cutting, including cutouts to accommodate any additional hall signal fixtures. New first floor combined hall position/direction indicators shall be shown on the shop drawings. Other specified fixtures are to be installed at locations approved by the Elevator Consultant.
4. Signage: Hall button faceplates shall include new signage for Appendix H code required pictograph.
5. 2F floor shall be the designated landing for Phase I operation. Floor 2R shall be the alternate landing.
6. "Hands Free" intercom system to designated location specified elsewhere in this division of the specification.
7. Contractor to identify and remove all elevator items in the shafts, pit and machine room which are abandoned or superseded by new work provided in this Contract.

8. Provide necessary wiring and conduits between disconnects and elevator controller. Submit power confirmation form for approval with details of current characteristics before beginning work. Main line power supply is 480 volts, 3 phase, 60 hertz.
  9. Products furnished but not installed under this Section include work in the elevator machine rooms, pits, hoistways and corridors and are specified in other sections but it shall be the responsibility of the Contractor to coordinate all work with other trades to complete the work. The Contractor shall perform all miscellaneous work, wire and appurtenances required to complete the work.
- C. Products previously installed but not furnished under this Section include retained equipment that shall be refurbished (see PART 2 descriptions for item refurbishing requirements) and maintained in like new condition. The following shall be retained, however, the successful Contractor has the option to provide similar new equipment, subject to Owner approval, if it is more cost effective:
1. Machine and Motor
  2. Rails
  3. Overhead, Car and Counterweight Sheaves
  4. Car and Counterweight Buffers
  5. Governor
  6. Counterweight
  7. Car Sling and Car Safeties
  8. Car and Platform
  9. Car and Counterweight Guides
  10. Hoistway Door Frames, Sills and Door Panels (except LD)
- D. Should the Contractor provide new equipment that affects the existing structure in lieu of that specified herein, the Contractor shall employ a Virginia licensed structural engineer to review and certify that all alterations to the existing structure required by the Contractor's selection of this option are completed. Submit drawings indicating any proposed changes necessary to accommodate the new equipment installation as well as code compliance. The Contractor shall make and pay for all changes and remove and dispose of existing equipment being replaced.
- E. Related Sections: See Table of Contents for other Sections.

### 1.3 REFERENCES

#### A. Codes and Standards:

1. All references to Codes, specifications, and standards shall be the latest edition, amendment and/or revision. All work and material shall comply with the Virginia Uniform Statewide Building Code - 1996 Edition , except that the elevator section shall comply with ASME A17.1 - 1993, A17.2.1 - 1996, A17.3 - 1996 and A17.5 - 1996.
2. The following building code references shall be the basis for this modernization: BOCA National Building Code/1996 EDITION.
3. All electrical and other apparatus furnished under this Contract shall be approved by UL and shall be so labeled or listed where such is applicable. Where custom built equipment is specified and the UL label or listing is not applicable to the completed product, all components used in the construction of such equipment shall be labeled or listed by UL where applicable.

### 1.4 SYSTEM DESCRIPTION

- #### A. Design Requirements: Furnish and install new microprocessor control, VVVF drive, hoistway landing control system, hoistway switches, operating devices, car and hall signal fixtures door operator, cab modifications, interlocks, door hardware, hoist and governor ropes and all wiring starting at elevator disconnects.
- #### B. Performance Requirements: Complete modernization of the electric traction elevator in full compliance with ASME A17 related codes and standards, including the providing of all labor, tools, appliances, materials, equipment, transportation and construction work of every kind required and incidental to the modernization of existing freight elevators #1 at the Swift Creek Water Treatment Plant Building; complete and ready for continuous satisfactory operation. The elevator shall meet the following performance standards:
1. Contract speed shall mean speed in the up direction with full capacity load in the car. Speed variation under any load condition regardless of direction shall be no more than 5 percent.
  2. The controlled rate of change of acceleration and retardation of the car shall not exceed 0.1G per second and the maximum acceleration and retardation shall not exceed 0.2G per second.
  3. Starting, stopping and leveling shall be smooth and comfortable without appreciable steps of acceleration or deceleration. Stopping shall be without bumps or jars.
  4. Full speed running shall be quiet and free from vibration and swaying. When car is standing at the floor with doors open, it shall remain firmly stopped and shall not "teeter".
  5. Rope stretch recovery shall be provided to relevel car at a floor, if the ropes slightly stretch.

6. Car shall not move from side to side during the process of opening and closing the doors.
7. Elevator control system shall be capable of starting the cars without noticeable "roll-back" of hoisting machine sheave, regardless of load condition in car or direction of travel.
8. The door opening time for a 48" two-speed door shall be 4.0 seconds or less. Door closing velocity to not exceed one foot per second.
9. Cycle time shall be measured from the time the doors start to close until the car has reached the next floor level, with the car stopped within the level allowance of plus or minus 1/4-inch and with the doors 75 percent (3/4) open, and shall be not more than 20.0 seconds without pre-opening. The measured floor to floor time interval shall be accomplished without releveling and with a maximum advance door opening action five inches from the floor level.
10. Door open (dwell) time shall be 3.0 seconds for a car call. Time shall be adjustable.
11. Notification time from time car lantern chimes or when door starts to close in response to a hall call shall be 5.0 seconds. Time shall be adjustable.
12. Nudging shall not be initiated until interruption of door reopening device has exceeded 20 seconds.

#### 1.5 SUBMITTALS

- A. General: Provide submittals in accordance with Conditions of Contract.
- B. Product Data: Provide submittals for the items listed below.
  1. Drawings of the cab modifications, showing details of construction, fastenings to walls, new car lighting fixture, new ventilation, hands free telephone or intercom device, emergency lighting and location of car equipment, etc.
  2. Cuts or drawings showing details of all signal and operating features including cutout sizes and locations. Show location of all equipment in inches from reference point.
  3. Features for accessibility for persons with disabilities.
  4. Wiring raceway layout showing all new control wiring and hookups in plan as part of submittal.
  5. Other drawings as required to illustrate the proposed installation.
- C. Shop Drawings: Contractor shall submit for approval Shop Drawings in accordance with the applicable requirements. The Contractor shall submit proof of Underwriters' acceptance and code approvals for equipment furnished. Shop Drawings shall include modifications to manufacturer's original fully dimensioned layout in plan and elevation, showing the arrangement of equipment and all pertinent details of the modified elevator, including the following as applicable to the systems specified herein:

1. Driving machine, controller, VVVF drive and filter, and other components located in machine room.
2. Car, counterweight, sheaves, supporting beams, guide rails, governor, buffers and other components located in hoistway.
3. Weights of new principal parts.
4. Top and bottom clearance and overtravel of car and counterweight, and refuge space at top and bottom.
5. Location of circuit breaker, switchboard panel or disconnect switch, light switch and feeder extension points in machine room.
6. Location in machine room of outlets for connection of traveling cables for car light and telephone.
7. Original Shop Drawings of previous installation, modified to show new work, are acceptable.
8. Provide written certification that sheave shaft is not overloaded by these modernization changes or provide written certification that load on sheave shaft does not exceed present loading. Note: The rated load has been reduced by 500 pounds to allow for installation of solid car enclosure sides above 6' high and a solid car top.
9. The name of manufacturer, type of style designation and any additional information called for below shall be listed on the shop drawings for each of the following items:
  - a. Elevator controller.
  - b. Second floor lobby position indicator.
  - c. Wiring diagrams.
  - d. Power door operator, motor, HP, etc.
  - e. Door interlocks and electrical contacts.
  - f. Top of car operating device.
  - g. Car ventilation exhauster.
  - h. Car emergency lighting.
  - i. Ropes (number, size, breaking strength, factors of safety).
  - j. Firefighters' Service features, details of components, instructions and signs.
  - k. Power requirements for proposed system.

D. Arrangement of Equipment:

1. Clearance around equipment located in the machine room shall comply with the applicable provisions of the National Electrical Code.
2. Equipment in the elevator machine room shall be so arranged that the rotating elements, sheaves, etc., can be removed for repairs or replacement by conventional means, without dismantling or removing other equipment components in the machine room.
3. Elevator controllers shall be located as indicated on the drawings. The driving machine shall be visible from its controller by direct view.

E. Quality Control Submittals:

1. Design Data: Include information on VVVF drive, car, door and landing control systems, programming instructions for communication systems and data sheets for car and hall fixtures.
2. Test Reports: Furnish field and test data reports and full load safety test reports.
3. Certificates:
  - a. All welding performed under this Section shall be performed by experienced welders in a neat and workmanlike manner. All welding on structural steel shall be performed only by persons who are currently qualified in accordance with ANSI, certified by the American Welding Society, ASME or an approved independent testing laboratory; and each such welder shall present this certificate attesting his qualifications to the Owner's representative whenever requested to do so on the job.

F. Contract Close-out Submittals:

1. Project Record Documents: Nine months prior to completion of Guarantee for the final car, provide four sets each of complete, legible "AS-INSTALLED" field wiring diagrams, including straight line diagrams, showing all electrical circuits, parts catalogs and maintenance instruction for all new equipment furnished. Changes made shall be noted on the drawings in adequate time to have the final drawings reproduced. All of the above shall be submitted to the Elevator Consultant for his distribution to the Owner.

G. Operation and Maintenance Data:

1. Repair Requirements: For elevator microprocessor control system, provide maintenance diagnostic tools, electrical schematic wiring diagrams, and any access codes and passwords required for all maintenance functions, including diagnostics, adjustments, and parameter reprogramming. Tools may be hand held or built into the control system and shall function for the life of the equipment. Tools that require recharging or reprogramming shall not be used. Provide complete operations and maintenance manuals including diagnostics instruction for troubleshooting the microprocessor system. Operating and maintenance data, tools and diagnostic equipment shall become property of the Owner.
2. The following information relating to the elevators shall be included:
  - a. Owner's Information Manual containing current data on major components, their maintenance and adjustment.
  - b. Installation and Troubleshooting Manual (Adjuster's Manual).
  - c. Description of system operating features.
  - d. Wiring diagrams needed for field troubleshooting, adjustment, repair and/or replacement of components.
3. All symbols shall be listed corresponding to the identity or markings on both machine room and hoistway apparatus of the system specified. Wiring diagrams shall also include values of capacitors and resistors.
4. Maintenance Data: At the project close-out, submit maintenance data and parts lists for materials and products.

H. Warranty: Submit warranty on letterhead of control manufacturer along with certification that installer is acceptable to the manufacturer.

1.6 QUALITY ASSURANCE

A. Qualifications

1. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods for proper performance of the work in this section. All work shall be performed in strict compliance with the approved product, manufacturer's printed instructions and the requirements of these specifications.
2. Use components produced by manufacturers regularly engaged in the business of manufacturing, installing, and servicing elevators of the types required by this section of these specifications, and with a history of successful production with products in satisfactory use in similar service. All controller parts and system solid state boards from the controller manufacturer shall be made available to the Owner for the life of the equipment at cost no greater than manufacturers' published list price.

B. Regulatory Requirements

1. Conform to BOCA 1996/VUSBC including 2000 Amendments.

C. Certifications

1. Before accepting the elevator installation, the Owner will hire an independent elevator inspector to test the elevator installation. Any corrective work needed as a result of this testing shall be done by the elevator contractor at no cost to the Owner.
2. The Contractor shall coordinate all work with Owner's Representative and schedule the services of the Owner's elevator inspector to make acceptance inspections and witness the Acceptance Tests performed by the Contractor as required by ASME A17.1 Code. All final testing shall be accomplished in the presence of the Owner's Designated Representatives.
3. Contractor shall submit copy of acceptance test report which includes documentation of the full load safety test and 125% brake test as required by Rule 207.8 of ASME A17.1.
4. Submit a certificate of completion upon completion of the elevator modernization, inspection and testing for the elevator machinery which indicates that the work has been tested in accordance with applicable NFPA and ASME A17.1 requirements and that the systems are operational, complete, and have no defects.

D. Pre-Installation Conference:

1. Submit delivery schedule for major components and detailed installation proposed progress schedule for each elevator.
2. Attend conference with Elevator Consultant and Contractor to review proposed elevator installation, preparatory work and Owner acceptance requirements.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Storage and Protection: The existing premises, including the building with all grounds and appurtenances, shall be protected from damage which might be done or caused by work performed under this Contract. Any and all such damages which occur shall be repaired by approved methods so as to restore the damaged areas to their original conditions. Do not overload, or permit facilities to interfere with progress. The Contractor shall provide protective materials and coverings where necessary to protect building surfaces and building contents from damage. Cribbing, shoring, and bracing shall be provided where necessary to guard against structural damage during execution of the work herein specified.

1.8 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Collect waste daily. Comply with NFPA 241 for removal of combustible waste. Enforce requirements strictly. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly.

Dispose in a lawful manner. Keep facilities clean and neat. Operate in a safe and efficient manner. Take necessary fire prevention measures.

- B. Existing Conditions: The building is presently in full operation. The Owner may require the Contractor to provide Temporary Service and an elevator operator from time to time for transporting material on the elevator to the top floor of the building. This service shall be available within one week from time elevator is taken out of service.
- C. TEMPORARY USE OF ELEVATORS BY OWNER: Should any elevator be required for use before final completion, the Owner shall authorize work under another division to provide without expense to Contractor, if required, temporary car enclosures, requisite guards or other protection for elevator hoistway openings, main line switch with wiring, necessary power, signaling devices, lights in car and elevator operators together with any other special labor or equipment needed to permit this temporary usage. The Contractor shall be reimbursed for any labor and material which is not part of the permanent elevator installation and which is required to provide temporary elevator service. In addition, the Contractor's temporary acceptance form shall be executed before any elevator is placed in temporary service, and the cost of power and operation, maintenance of the equipment and rehabilitation of equipment shall be paid for by the Owner. Include the rate for this service and the elevator operator rate on both regular and overtime basis in the Contractor's proposal.
- D. Field Measurements:
  - 1. Contractor shall verify all dimensions before ordering material.
  - 2. Contractor accepts elevator in an "as is" condition subject to minimum acceptable insulation resistance of one megohm between each conductor and ground and between each conductor and other conductors. Contractor shall take readings in the presence of the Owner's Representative to document motor field resistance (Ohms) and megohms to ground test of motor prior to beginning any work. Should repairs be necessary to correct motor insulation, additional work authorized by the Owner shall be performed at the rates indicated on the Bid Form.
  - 3. The Contractor shall identify and describe all cutting and patching necessary for any auxiliary hall fixtures and wiring to remote elevator devices, where required, and perform this preparatory work in a timely manner. All cutting and patching in the shaft and machinery spaces for installation of elevator equipment provided under this division shall be responsibility of this Contractor.

#### 1.9 SEQUENCE AND SCHEDULING

- A. Upon arrival of material, Contractor will be allowed to initially remove car from service to perform the specified repair and mod work.
- B. Time of completion is of the essence.
- C. Elevator installer shall provide schedule information to Contractor. Contractor shall develop a project schedule indicating start dates and activity duration time for all elevator related activities.
  - 1. Development of installation drawings and component specifications.

2. Calculations.
3. Review of drawings, specifications, and calculations by the Owner and Elevator Consultant.
4. Project mobilization.
5. Installation schedule shall indicate start dates and major component work activity duration.
6. Final cleanup and testing.
7. Final inspection, Beginning of 1 year guarantee and maintenance service.

#### 1.10 WARRANTY

- A. General: Warranties shall be in addition to, and not a limitation of, other rights the Owner may have under the Contract Documents. Warranty shall be for a period of one year and run consecutively with the initial 1 year maintenance service.

#### 1.11 MAINTENANCE

- A. A quality maintenance service consisting of regular monthly examination, lubrication, adjustments and repairs of elevator #1 shall be provided by the Contractor from the time of Contract award until one year after completion. Contractor shall perform full maintenance service in accordance with the following:
  - B. Furnish all labor and supplies, parts and material necessary to regularly and systematically clean, examine, adjust, lubricate as required, and if conditions warrant, repair or replace:
    1. Machine, worm, gear, thrust bearings, drive sheave, drive sheave shaft bearings, brake pulley, brake coil, brake contact, brake linings, and component parts.
    2. Machine motor, motor windings, rotating element and bearings.
    3. Controller, landing control equipment, all relays, solid state components, microprocessors, resistors, condensers, transformers, contracts, leads, dashpots, timing devices and computer devices.
    4. Governor, governor sheave and shaft assembly, bearings, contacts and governor jaws.
    5. Deflector or secondary sheave, car and counterweight sheaves, bearings, car and counterweight buffers, car and counterweight guide rails, top and bottom limit switches, governor tension sheave assembly, counterweight and counterweight guide shoes including rollers or gibs.
    6. Hoistway door interlocks, hoistway door hangers, bottom door guides, auxiliary door closing devices and door restrictors.

7. Automatic power operated door operator, car door hanger, car door contact, door protective devices(s), load weighing equipment. Carframe, car safety mechanism, platform, wood platform flooring, tile floor covering in the elevator, car guide shoes including gibs or rollers.
  8. Car operating panel(s) and equipment, car and hall lanterns, hall buttons and signal devices.
- B. Contractor shall also:
1. Examine periodically all safety devices and governors and conduct an annual no load safety test, and each fifth year perform a full load, full speed test of safety mechanism, overhead speed governors, car and counterweight buffers as outlined in the ASME/ANSI A17.1 Safety Code for Elevators and Escalators, current edition as of the date of this Invitation. The car balance shall be checked and the governor set. If required, the governor will be recalibrated and sealed for proper tripping speed.
  2. Renew all wire ropes as often as is necessary to maintain an adequate factor of safety; to equalize the tension on all hoisting ropes, repair or replace conductor cables and hoistway and machine room wiring.
  3. Keep car emergency light units in an operable condition at all times, test special emergency (firefighters' service) service and emergency power circuits, where provided in accordance with Code requirements.
  4. Furnish lubricants specified to the various lubrication needs.
  5. A supply of contacts, coils, leads, brushes, lubricants, wiping cloths and other minor parts shall be kept in each machine room for the performance of routine preventative maintenance. Steel cabinets shall be furnished for the storage of replacement parts and maintenance sundries. Only genuine parts and supplies as used in the manufacture and installation of the original equipment shall be provided.
- C. A complete set of current, legible schematic wiring diagrams shall be maintained in each elevator machine room for each elevator machine contained therein. To the extent that any of the required schematic wiring diagrams are not available at the time of contract award, it will be the responsibility of the contractor to provide same at no cost to the owner. At the end of the contract term, any schematic wiring diagrams provided by the contractor shall become property of the Owner. All circuit changes made shall be clearly marked up on each applicable wiring diagram.
- D. Contractor shall periodically clean hoistway, including all equipment located in or moving through the hoistway, car top, car sling, safeties, appliances, pits, sills, door tracks and hangers.
- E. Contractor shall not be required to install new attachments on the elevators whether or not recommended or directed by insurance companies or by governmental authorities. Contractor shall not be required to make renewals or repairs necessitated by reasons of negligence or misuse of the equipment or any other reason beyond his control except ordinary wear and tear.

- F. Contractor shall not be responsible for car enclosure, which includes removable panels, door panels, plenum chambers, hung ceiling, car light tubes and bulbs, ballast, hoistway gates, hoistway doors, frames, sills.
- G. For the purpose of clarification, any item not specifically excluded shall be considered the contractor's responsibility.
- H. Provide emergency 24-hour call back service without charge during the period from time of award until a period of one (1) year from the date of substantial completion of the project. This service shall not be subcontracted but shall be performed by the Contractor. All work shall be performed by competent employees during regular working hours of regular working days. Maintenance mechanic shall not be used to perform modernization work but shall be assigned to maintain the building's elevators other than those under construction during the course of the work of this Section.

## **PART 2 - PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Subject to compliance with requirements, provide products of one of the following:

Virginia Controls, Inc.- MVFOL Non-regenerative

Elevator Controls Corp. - Model V800 VVVF-OL Non-regenerative

Motion Control Engineering – PTC-AC OL Series M Non-regenerative

### **2.2 MATERIALS**

- A. Removal of old material:

- 1. Remove and dispose of all material from the old elevator system not used in the modernization, up to existing mainline disconnect.

### **2.3 EQUIPMENT**

- A. MACHINE - refurbish and reuse the Dover single wrap traction geared machine and motor and perform the following repairs:

- 1. New ropes are to be installed as specified elsewhere in this Section.
- 2. Clean machine. Clean out gearcase and bearings and relubricate. Clean and refill machine gearcase and bearing reservoirs using lubricants recommended by the manufacturer.
- 3. All components used in the refurbishing of the machine shall equal or exceed those originally furnished by the manufacturer of the machine.
- 4. Existing circuits shall be checked and adjusted as required for the new VVVF drive.

5. Clean and paint equipment upon completion of repairs. Color of machine to be gloss enamel of color selected by Owner.
- B. SHEAVES - Refurbish and reuse car and counterweight 2:1 sheaves and deflector sheaves. Check bearing seals for leaks and replace any defective seals. Clean and refill bearing reservoirs using lubricants recommended by the manufacturer. Clean and paint equipment upon completion of repairs. Color of deflector sheaves to match machine. Utilize equipment manufacturer's recommended procedures for cleaning, surface preparation, and painting.
  - C. BRAKE - Refurbish and reuse. Brake shall be dismantled and cleaned, rebushed, realigned, repaired and adjusted. All worn parts, pins, etc. shall be replaced. New brake linings shall be installed and the brake adjusted to running clearances recommended by the manufacturer and set to hold 125% of duty load per ASME A17.1 requirements. Clean and paint equipment upon completion of repairs. Color of brake to match machine. Utilize equipment manufacturer's recommended procedures for cleaning, surface preparation, and painting.
    1. Upon initial disassembly of brake, Contractor shall turn over brake shoes/arms containing linings to Owner's asbestos abatement contractor for removal of linings and disposal of same. Owner's asbestos abatement contractor shall return arms/shoes to Contractor for installation of new linings and brake reassembling.
  - D. AUTOMATIC SELF-LEVELING - The elevator shall be provided with automatic self-leveling landing control system that shall bring the elevator car level with the floor landings + or - 1/4" regardless of load or direction of travel. The automatic self-leveling shall correct for overtravel or undertravel and rope stretch.
  - E. CAR SLING - Refurbish and reuse the existing car sling. Check and adjust car sling alignment and secure all fastenings as required. Clean and paint with field coat of black paint for car sling and gray paint for car tops.
  - F. SAFETY- Refurbish and reuse existing type A car safety. Put safety in proper operating condition and test per ASME A17.1, including the 125% overload test and follow A17.2 recommended procedures. Adjust as required to stop the car or counterweight should it attain excessive descending speed.
  - G. GOVERNOR – Refurbish and reuse car governor. Test in accordance with requirements of A17.1 code for above safety application. The governor shall actuate the car safety when excessive speeds occur
  - H. WIRING - All wiring from the main line disconnects throughout the elevator system shall be replaced. All wiring and electrical interconnections shall comply with the governing codes. Insulated wiring shall have flame retardant and moisture-proof outer covering, and shall be run in conduit, tubing or electrical wireways. Traveling cables shall be flexible and suitably suspended to relieve strain on individual conductors. The entire wiring system shall be tested for insulation to ground.
  - I. HOISTWAY OPERATING DEVICES - Normal terminal stopping devices shall be provided to slow down and stop the car automatically at the terminal landings and to automatically cut off the power and apply the brake, should the car travel beyond the terminal landings.

- J. PIT SWITCH - Emergency stop switches shall be located in the pit 4 feet above pit floor and accessible from the pit access door adjacent to pit ladder 18 inches above access door.
- K. BUFFERS - Refurbish and reuse spring buffers. Clean and paint all pit equipment with a field coat of black paint except buffer springs which shall be painted safety yellow. Put all buffers and stands in proper alignment, operating condition and positioned for ASME A17.1 runby requirements. Buffer support channels shall be cleaned and painted with rust inhibiting black paint.
- L. GUIDE RAILS - Refurbish and reuse existing steel elevator guide rails. Clean and refasten rails as required so that rails are plumb and securely fastened to the building structure. Unplaned surfaces shall receive a field coat of black paint.
- M. SOLID ROLLER GUIDES - Refurbish and reuse existing car and counterweight solid guide assemblies. Clean and paint with field coat of black paint.
- N. ROPES - Provide new hoist and governor ropes. All ropes shall consist of at least eight strands wound about a hemp core center.
- O. PLATFORM - Refurbish and reuse existing platform. Clean and paint exposed surfaces with field coat of black paint. Prepare surface in accordance with paint manufacturer's requirements.
- P. CAR & HOISTWAY DOOR POWER OPERATION – Provide new closed loop door operator on front opening. Doors on the cars and at the hoistway entrances shall be power operated by means of a high speed door operator mounted on top of the car. Operator shall power the doors at minimum 2 feet per second opening speed. The car door and hoistway door shall be mechanically connected and shall move together in opening and closing. Operator shall be approved before ordering and fully comply with this specification. Provide front and rear car door protective devices to prevent car doors from being opened when car is not in the landing zone.
  - 1. Door operation shall be automatic at each landing with door opening being initiated as the car arrives at the landing and closing taking place after expiration of adjustable time intervals. A car door electric contact shall prevent starting the elevator away from the landing unless the car door is in the closed position.
  - 2. Door close shall be arranged to start after a minimum adjustable time, consistent with handicapped requirements, from notification that a car is answering a hall call.
  - 3. Doors shall be arranged to remain open for a time period sufficient to meet UFAS requirements, Section 4.10, and as stipulated in paragraph 1.4B.
  - 4. The time interval for which the elevator doors remain open when a car stops at a landing shall be independently adjustable for response to car calls and response to hall calls.
  - 5. Provide new approved front interlocks which shall prevent operation of the elevator unless all doors for that elevator are closed and shall maintain the doors in their closed position while the elevator is away from the landing.

Provide emergency access unlocking devices for access to the hoistway at all entrances. Refurbish and reuse rear door interlock. Adjust rear door operator to provide minimum  $\frac{3}{4}$ " clearance from nearest hoistway component.

6. A reversal of direction of the doors from the closing to opening operation, whether initiated by the reopening device or the door open button, shall be accomplished within no more than 1 1/2 inches of door movement. Particular emphasis is to be placed on obtaining quiet interlock and door operation and smooth, fast, dynamic braking for door reversals and stopping of the doors at both extremes of travel. Beginning of opening movement shall be so timed that doors will not reach fully open position until car platform has stopped within 1/4-inch of floor landing. The advance opening of doors shall be synchronized with operation of leveling car and opening car and hoistway doors simultaneously.
  7. Provide closed loop servo electronic door control for the new door operator. Maintain constant door closing force within the current ASME A17.1 elevator code standards for force and kinetic energy. Front door control shall be solid state control boards having the closed loop servo feature with armature voltage and current feedback to obtain constant closing torque.
  8. Provide nudging operation as follows: If there is either a hall call or a car call and the doors are prevented from closing for a fixed time period, the door protective device shall be rendered inoperative, a buzzer shall sound on the car and the doors shall close at approximately half force and speed. Normal operation shall resume at the next landing reached by the car. Nudging shall not start before 20 seconds have elapsed and time shall be adjustable.
- Q. TRACKS AND HANGERS - Provide new hoistway door hanger rollers. Replace hanger rollers with steel sheaves equipped with ball bearings. Set upthrust rollers to minimum clearance. Provide hanger retention devices for each door.
- R. DOOR INTERLOCKS - Existing front door interlocks shall be replaced by interlocks manufactured by an approved vendor and equipped with the door restraint device specified by the door operator manufacturer.
- S. CAR DOOR PROTECTIVE DEVICE – Refurbish and reuse existing multi-beam infra-red screen type car door protection devices. Provide necessary circuits to accomplish the following operation on the new passenger car doors:
1. The doors shall be prevented from closing from their full open position if a person comes within the car door opening. If a person or object enters the door opening as the doors are closing, the doors shall reverse and reopen. The doors shall reclose after a minimal interval.
  2. After a stop is made, the doors shall remain open for a time interval to permit passenger transfer, after which the doors shall close automatically. This interval shall be fully adjustable and shall be less for a car call stop than for a hall call stop or a coincident car/hall call stop.
- T. CAR OPERATING PANEL – Remove existing and provide new. One panel shall be provided in the elevator. Panel shall be in front return. Panel shall contain a bank of mechanical illuminated buttons marked to correspond to the landings served, an

emergency call button, door open and door close buttons. The emergency call button shall be connected to a bell that serves as an emergency signal.

1. A light switch, fan switch, independent service switch, inspection switch, emergency light test button ("PUSH TO TEST"), in car stop switch and electrical receptacle shall be located in a lockable service cabinet in the upper portion of the car operating panel.
2. Panel shall have stainless steel faceplate and square operating buttons with rounded corners and integral illumination. Buttons shall have raised handicap symbols integral with frame to the left of button unit. Raised letters and symbols shall be finished in stainless with black fill. Raised handicapped markings shall be provided for the car buttons and car controls in compliance with the latest revision of ASME A17.1 and UFAS. Submit design for approval. Floor buttons shall have integral white illumination and white inserts with black characters. Red fill shall be used for emergency buttons/key switch devices. Tactile and visual control indicators (specified above), car button size (specified above) and location for the car buttons and car controls (emergency controls at 35", maximum height of floor buttons at 48" above car floor) shall be in compliance with UFAS standard specification 4.10.12 for Car Controls.
3. Engrave and fill black upper (stainless) portion of panel faceplate with firefighters' service phase II ASME A17.1 code required wording (heading 1/4" char., instructions 3/16" char.). Provide a separate sentence (3/4" char.) stating "SMOKING IN ELEVATOR PROHIBITED BY LAW" as required by the Commonwealth of Virginia. Engrave and fill appropriate portion of main panel with instructions (1/8" char.) "YOU MAY SPEAK WHEN LIGHT IS ON - MOMENTARY LIGHT INDICATES ALARM RECEIVED" for intercom device specified under INTERCOM SYSTEM section elsewhere in this Section. Button for activation of intercom device shall read "PUSH TO TALK". Engrave and fill black at top most (stainless) portion of car panel as follows:

CAR 1 (1/2" characters).

CAPACITY 3500 POUNDS (1/2" characters)

Provide stainless steel inspection certificate frame sized to fit Chesterfield County inspection certificate.

- U. INTERCOM SYSTEM - An emergency service intercom system for communicating between the Owner's 24 hour service desk and the elevator car and elevator machine room and ground floor lobby panel shall be provided. System shall be operated by the Owner's phone system. The intercom station shall be connected into a designated phone line provided by the Owner.

1. The system shall be of vandal resistant design and completely compatible with all connected equipment. System shall have the capability of sending building and elevator number to offsite personnel. The elevator car intercom station shall be handsfree operation through a microphone mounted in the speaker cabinet and a speaker located behind the main car operating panel. Elevator car shall be furnished with a concealed speaker with backbox, integral with the new car operating panel faceplate. Provide all required speakers in cab. An LED in the car panel shall illuminate next to approved engraved wording when the intercom is in use, indicating help is on the way. Submit design of fixtures for approval. Include shielded wires in traveling cable for car speaker.
  2. When the emergency call button within each car is pushed, a circuit is energized that will alarm the Owner's communications center, which is manned 24 hours a day, via telephone line and establish voice contact through the elevator speaker and microphone. Pushing the call button in the car will call Owner's communications center and establish voice contact between the car and communications center. The called party shall have the ability to keep the intercom from automatically turning off. Elevator shall utilize a single phone line supplied to the terminal block on each elevator controller by the Owner's phone company. Provide Owner with documentation for maintaining and programming the system.
  3. The car unit shall have the ability to signal a deaf person that the emergency call has been acknowledged. Installation and programming shall be performed in accordance with the manufacturer's instructions. Upon deactivation of the car signal either through programmable timing or by the button, the communication system shall go into the off or stand-by mode. Calls may be initiated from the car or any phone connected to Owner's communication system.
  4. Above description is partially based on operation of handsfree telephone, autodialer model #EMS4 offered by Electronic Micro Systems, Inc., Hauppauge, NY (800)-333-3671. Coordinate system design with Owner's phone system to avoid duplication of devices. Other manufacturers which are acceptable if specification provisions can be met are as follows:  
  
Rath Microteck, Sussex, WI (800) 451-1460  
  
Talk-A-Phone, Chicago, IL (312) 539-1100
- V. CAR POSITION INDICATOR - A digital car position indicator shall be installed integral with car operating panel. The position and direction of the car in the hoistway shall be shown by the illumination of the 1.375 inch high or larger indications corresponding to the landing at which the car is stopped or passing. Submit design for approval. Submit proposed color of lens for Owner color approval.
- W. Provide passing floor chimes.

- X. EMERGENCY CAR LIGHTING - An emergency power unit employing a 6 volt sealed rechargeable battery and totally static circuits shall be provided that shall illuminate the elevator car and provide current to the alarm bell in the event of normal power failure. The equipment shall comply with the requirements of the latest revision of the ANSI/ASME A17.1 Code. The lens shall be vandal resistant, integral with the upper portion of the car panel above the service key switches. Means shall be provided to test unit from within the cab.
- Y. HALL BUTTONS – Provide new hall button fixtures. Each passenger elevator hall button fixture shall have buttons initiate a call with door time as required by UFAS SEC. 410.7.
1. One riser of new hall buttons is required. Each hall button fixture shall have one set of call buttons.
  2. When a call is registered by momentary pressure on a landing button, an integral light in the button shall become illuminated and remain illuminated until the call is answered.
  3. Provide firefighters' service Phase I key switch, jewel and engraved Phase I instructions for car #1 in the hall button fixture for the designated landing.
  4. At each terminal landing, one fixture with push button unit shall be provided and at each intermediate landing, one fixture shall be provided containing "UP" and "DOWN" push buttons. The new buttons shall be centered at the height required by ANSI A 117.1 code and UFAS. Signage (pictograph) as required by ASME A17.1 code shall be engraved in the upper portion of the fixture faceplate per Appendix H. Surface mounted faceplates shall be utilized.
- When a call is registered by momentary pressure on a landing button, an integral light in the button shall become illuminated and remain illuminated until the call is answered. Faceplate shall be of satin finish stainless steel. Design of buttons shall match car operating panel buttons. Faceplate shall cover cutout left from old hall button.
- Z. FIREFIGHTERS' SERVICE- Firefighter's Service operation shall be provided in compliance with the latest revision of the ASME/ANSI A17.1 Code.
1. Phase I to return the elevator non-stop to a designated floor shall be initiated by an elevator smoke detector system or a key switch provided in the second floor lobby fixture. If an elevator is on independent service when the elevator is recalled on Phase I operation, a buzzer shall sound in the car and a jewel shall be illuminated.
  2. A key switch in the car shall be provided for in-car control of each elevator when on Phase II. Faceplate of car panel shall be engraved with instructions for Phase II operation.
- AA. CAR LANTERNS – Provide new triangle type hall lanterns lens, solid state boards, chimes and faceplates in car door jamb visible from hall button. When a car is stopping at a landing, the lantern indicating the direction in which the car is traveling shall become illuminated upon arrival of the car and a chime shall sound once for the "UP"

direction and twice for the "DOWN" direction to announce the impending arrival of the elevator car.

AB. INSPECTION OPERATION - An enabling key switch shall be provided in the car operating panel to permit operation of the elevator from on top of the car, for inspection purposes, and make car and hall buttons inoperative.

1. On top of the car an operating fixture shall be provided containing continuous pressure "UP" and "DOWN" buttons, an emergency stop button, and a toggle switch. This toggle switch makes the fixture operable and, at the same time, makes the door operator and car and hall buttons inoperable. The fixture shall be portable by means of a hand held device attached to a service cord as allowed by ASME A17.1.

AC. HOISTWAY ACCESS - Emergency keyways shall be provided for all hoistway entrances.

AD. CONTROLLER AND VVVF DRIVE

1. Elevator controller shall be solid-state microprocessor based for dispatch and motor control.

2. A micro-computer based control system shall be provided to perform all of the functions of a safe elevator motion and elevator door control. This shall include all of the hardware required to connect, transfer and interrupt power, and protect the motor against overloading. The system shall also perform car operational control.

3. Each controller cabinet containing memory equipment shall be properly shielded from line pollution. Micro-computer system shall be designed to accept reprogramming with minimum system down time.

4. Elevator control equipment must be sized to fit in space indicated on drawings and comply with NEC required clearances.

5. The system shall utilize a landing control device, manufactured by the controller manufacturer, to establish incremental car position to an accuracy of 1/4" or better. The system shall not require movement to a terminal landing for the purpose of finding the correct car position.

6. The system shall utilize an automatic two-way leveling device to control the leveling of the car to within 1/4" above or below the landing sill. Overtravel, undertravel, or rope stretch must be compensated for and the car brought level to the landing sill.

7. The individual car controller shall be capable of learning the position of each floor in the building to an accuracy of .1875 inches.

8. The individual car controller shall have a software program that uses mathematical methods to create an idealized optimum velocity profile of car travel from any floor to any other floor, providing a smooth and stepless elevator ride. All the system motion parameters (jerk, acceleration, deceleration rates, etc.) shall be field programmable with parametric limitations for the system dynamics, and be stored on EPROM as non-volatile memory.
  9. The individual car controller shall have an independent safety processor that monitors the speed of the car and creates a phantom speed contour near the terminal landing, so that the car would not be capable of traveling faster than the phantom speed contour. This processor should work independently of any other logic or motion control processors in the system.
  10. The controller shall utilize a solid state drive VVVF drive unit to control the elevator. The solid-state power control shall be an open loop design capable of working with the existing two-speed motor. It shall be a compact self-contained unit that will provide stepless acceleration and deceleration and provide regulation at all speeds.
  11. The controller shall provide the required electrical operation of the elevator control system including the automatic application of the brake, which shall bring the car to rest upon failure of power.
  12. The power control shall be arranged to continuously monitor the performance of the elevator such that if the car speed exceeds 150 fpm during access, inspection, or leveling, the car shall shut down immediately, requiring a serviceman to reset it.
  13. Equipment cabinet color shall be baked enamel of manufacturer's standard color.
- AE. INDEPENDENT SERVICE - A switch shall be provided in the car operating panel which, when actuated, shall cancel previously registered car calls, disconnect the elevator from the hall buttons, and allow operation from the car buttons only.
- AF. FULL COLLECTIVE SIMPLEX - Provide full selective collective simplex with new landing control system. Provide new hall button fixtures with integral illumination. Each hall button and car button initiates a separate call. Car calls and up and down hall calls can be registered at any time. All calls will remain registered even if the emergency stop switch is opened or the power fails. On up travel the car shall answer all car calls and up hall calls only in order in which the landings are reached. It will continue up only until it answers the highest car call or highest up or down call. At this highest call car button preference is available to the incoming passenger. Similarly on down travel the car will respond to car calls and down hall calls in the order reached.
1. Provide independent service feature, initiated by a key switch in the car operating panel, to allow car to be used by operator without hall call registration. Hall buttons shall become inactive upon initiation of independent service.

AG. SYSTEM SUPPORT - The following equipment and technical support shall be provided:

1. Diagnostic 12 inch minimum black and white or green phosphor CRT Display Terminal with keyboard, onboard diagnostics or hand held devices may be utilized in lieu of keyboards but means must be provided to retrieve and print out inquiries/fault data from the machine room.
2. Controller shall have PC boards manufactured by the controller manufacturer. Contractor training course for the installer shall be provided by the controller manufacturer.

AH. ENCLOSURE

1. Remove expanded metal between six foot high enclosure side panels and car top and install new 14 gauge solid furniture steel panels with painted enamel finish.
2. The car shell walls, other than entrance walls, shall be of 14 gauge furniture steel with painted enamel finish.
3. Refinish existing side panels and return panels with integral entrance columns to color matching new solid panels. The return panels shall be arranged to received the new applied car operating panels.
4. The car entrance shall be provided with suitably reinforced 1¼" thick center opening door(s) of 16 gauge furniture steel. On the car side, each door shall have a 20 gauge satin finished stainless steel facing which extends around its leading edges. Each door shall be provided with an applied or integral hanger.
5. Remove existing expanded metal car top and provide new car top of 12 gauge furniture steel and shall be suitably reinforced. It shall have a white baked enamel finish on the car interior side, a top exit and square fan grille. Cab shall be arranged for lighting fixture with two bulbs.
6. Panel construction and all cab materials shall be in conformance with Rule 204.2a and manufacturer shall provide certification of this on drawings.
7. The top emergency exit shall be arranged to lock and be openable without tools from car top.
8. A two-speed exhaust fan shall be mounted on the car top. Provide white matte grill around fan opening.
9. Add ¼" shim to front second floor hoistway sill to reduce clearance to 1¼".
10. Retain and reuse existing flooring.
11. The car enclosure shall comply with the latest revision of the ASME/ANSI A17.1 code.

AI. PASSENGER HOISTWAY ENTRANCES

1. Provide hoistway entrances in accordance with Scope of Work sheet, selected finish of Entrance Frames and Door Panels shown below and the following specifications:
2. Finish:
  - a. Entrance Frames: Existing
  - b. Door Panels: Existing. Paint interior (hoistway) side of panels with field coat of enamel of color selected by elevator consultant except remove rear loading dock door panels and provide new.
  - c. Sills: Existing. Provide maximum running clearance between car and hoistway sill of 1¼" per UFAS regulations.
  - d. Fascia Plates: Existing. Paint interior (hoistway) side with field coat of enamel of color selected by elevator consultant.
  - e. Toe Guard: Existing. Paint interior (hoistway) with field coat of enamel of color selected by elevator consultant.
  - f. Dust Cover: Existing. Paint interior (hoistway) side with field coat of enamel of color selected by elevator consultant.
  - g. Headers: Existing. Paint interior (hoistway) side with field coat of enamel of color selected by elevator consultant.
  - h. Struts: Existing.
  - i. Hangers: Existing with new steel hanger rollers and nylon track liners.
  - j. Hanger Covers: Existing. Paint interior (hoistway) side with field coat of enamel of color selected by elevator consultant.
  - k. Bottom of all hoistway doors: Provide new heavy duty removable laminated phenolic guides & fire stops integral with the unit design. Minimum of two per door panel.
  - l. Hoistway Door Marking: Provide new, painted on hoistway side in 4" high letters.
  - m. Sight Guards: Remove existing and provide new at all floors.
  - n. Handicapped Jamb Marking: Jamb marking plates, with raised 2 inch floor markings and Braille to identify each landing, shall be applied to both jambs on each entrance, centered 60 inches from the floor. Submit design for approval.

- o. Labels (U/L): Entrance devices provided under this contract shall be manufactured in accordance with the procedures established by Underwriters Laboratories or other approved testing laboratory and shall be so labeled.

## 2.4 FABRICATION

- A. Car operating panel shall have a hinge mounting for servicing the components.
- B. Tolerances
  - 1. Running Clearances
    - a. Running clearances between the car sill and the hoistway sill shall be adjusted to provide an optimum running clearance of 1-1/4 inch. Contractor is to perform survey and submit plan of correcting excess running clearances for approval by Elevator Consultant. Include plan view of layout, manufacturer's drawings of car sill, door operator, interlock and clutch assembly with plan.

## PART 3 - EXECUTION

### 3.1 EXAMINATION AND PREPARATION

- A. Verification of Conditions:
  - 1. Verify that hoistway, pit and machine room are ready for work of this Section.
  - 2. Verify shaft and openings are of correct size and within tolerances.

### 3.2 PREPARATION

- A. Protection:
  - 1. The Contractor shall construct and maintain barricades for all elevator work as required to keep unauthorized persons and the general public a safe distance from work and material storage areas. At no time shall barricades be arranged in such a way as to obstruct or impede safe egress from the building.
  - 2. The Contractor shall cooperate with the Owner to protect the public and property and to maintain safe, secure conditions.

### 3.3 INSTALLATION

- A. Install system and components in accordance with specifications, drawings and ANSI/ASME A17.1.
- B. Install components and connect equipment to building utilities.
- C. Arrange components in machine room so equipment can be removed for repairs or replaced without dismantling or removing other equipment components.

- D. Adjust for smooth acceleration and deceleration of car so as not to cause passenger discomfort.
- E. Adjust doors to start opening in advance of stop at floor level such that doors are at least 3/4 open when car is stopped level with floor.
- F. Adjust automatic floor leveling feature at each floor to achieve maximum 1/8 inch from flush.

### 3.4 APPLICATION

#### A. Interface with Other Products

- 1. Asbestos-related brake and door work indicated in paragraphs 2.3 C and 2.3 T.

#### B. Welding

- 1. Obtain Owner's approval before performing any welding operations. All welding shall be oxyacetylene or electric arc. High test welding rods suitable for the material to be welded shall be used throughout. All special fittings shall be carefully laid out and joints shall be accurately matched at intersections. All welds shall be of sound metal free from laps, cold shuts, gas pockets, oxide inclusions and similar defects.
- 2. All necessary precautions shall be taken to prevent fire or other damage occurring as a result of welding operations. Approved fire prevention and fire management procedures shall be observed at all times. To avoid accidental or unnecessary activation of the fire alarm system, the owner shall be notified prior to the commencement of cutting, burning or welding.

#### C. Miscellaneous Iron and Steel

- 1. Furnish and install all steel supports, hangers and other devices required to support and provide access to conduit, equipment, etc.
- 2. All work shall be cut, assembled, welded and finished by skilled mechanics. Stands, brackets, frameworks and platforms shall be properly sized and well constructed.
- 3. Measurements shall be taken on the job and worked out to suit adjoining and connecting work. Members shall be straight and true and accurately fitted. Scale, rust and burrs shall be removed. Welded joints shall be ground smooth where exposed. Drilling, cutting and fitting shall be done as required to properly install the work and accommodate the work of other trades as directed by them.
- 4. Members shall be generally welded or riveted, except that bolting may be used for field assembly where welding or riveting would be impractical.
- 5. All shop-fabricated iron and steel work shall be cleaned and dried and given a shop coat of rust inhibitive primer and one coat of enamel paint on all surfaces and in all openings and crevices. All field connections shall have their surfaces thoroughly cleaned and be given one coat of rust inhibitive primer and one coat of enamel paint. All painting and surface preparation shall be in accord with

Steel Structures Painting Council (SSPC) standards for painting structural steel and cast iron, as applicable.

6. All structural steel shall meet the requirements of ASTM A36. Cast iron shall meet the requirements of ASTM A48, Class No. 20.

D. Hangers and Supports

1. All required hangers, supports, clamps, sleeves, etc., required for installation of the electrical work are included as a part of the work of the Contract.
2. All horizontal runs of conduit shall be properly grouped and hung to true alignment using substantial and appropriate hangers, clamps, conduit straps, etc., equal to Kindorf, Unistrut or Caddy as applicable. Hanger and support locations shall be coordinated with work of other trades and existing work to avoid conflicts. Hangers and supports shall be placed at intervals not exceeding the spacing recommended by the NEC and NECA. Supporting rods shall be threaded only on ends, with an allowance for adjustment.
3. Wire and strap hangers will not be permitted. Conduit and fittings shall be secured by metal clips or straps using toggle bolts or lead expansion sleeves on masonry and wood screws on woodwork. Where fastened to bar joists, bulbtees and/or flange beams, wedge hangers, tap clips and flange clips as manufactured by Caddy or equal shall be used.
4. Inserts may be used in locations approved by the Elevator Consultant and shall be Phillips "Red Head" or approved equal. Explosive powder studs or detonator assisted studs or anchors will not be permitted.
5. Conduit Sleeves and Openings - Wire and Cable
  - a. All sleeves required to accommodate the work of this Contract shall be provided.
  - b. All sleeves where required, shall be extended 1/4 inch beyond the finished surface in finished areas and 2 inches in equipment and similar rooms. Conduits passing through fire walls and floors shall be fire-stopped with manufacturer's standard fire-stopping sealant having fire-resistant ratings for identical assemblies per ASTM E 814 by Underwriters Laboratory, Inc. System Design No. CAJ1134, CAJ1071, CAJ1142 - 2 hours, Floor & Wall Through - Penetration Firestop System.
  - c. All conductors shall be copper.

E. GROUNDING

1. Provide grounding for all electrical equipment, apparatus and devices in accordance with the applicable requirements of the National Electrical Code.

### 3.5 FIELD QUALITY CONTROL

#### A. Tests

1. Before accepting the elevator installation, the Owner shall hire and pay for an independent QEI certified elevator inspector to test the elevator installation. Any corrective work needed as a result of this testing shall be done by the elevator contractor at no cost to the Owner.
2. Perform tests required by ASME/ANSI A17.1 and Owner's elevator inspector.
3. Schedule tests with authorities having jurisdiction and with elevator consultant, Owner, and Contractor present. A minimum notice of 48 hours shall be required prior to all testing. All tests shall be performed during normal business hours of the building.
4. Test the elevator system with the contractor installing the Smoke Detector System to insure that elevators are recalled to proper floor.
5. Acceptance test load for passenger elevators shall be 100% for full load safety test, and 125% for brake and emergency power tests per ASME A17.1 Rule 207.8, Part X procedures and ASME A17.2.1 procedures in Elevator Inspector's Manual for Electric Traction Elevators.

#### B. Inspection

1. Schedule acceptance tests with Owner's elevator inspector.
2. Follow procedures in ASME A17.2.1 Inspector's Manual for Traction Elevators.

#### C. Manufacturer's Field Service

1. Begin maintenance service upon Owner acceptance of each elevator and continue until one year after completion of last car.
2. Obtain from the Manufacturer and furnish to the Owner all data affecting the elevator modification, including "AS-INSTALLED" circuit and control wiring diagrams and maintenance manuals.

### 3.6 CLEANING

#### A. Final Cleaning

1. At the completion of the work, the Contractor shall remove from the project site all tools, surplus materials, equipment, scrap debris, waste, temporary facilities and barricades. All building surfaces within the construction area shall be thoroughly cleaned.

### 3.7 DEMONSTRATION

- #### A.
- Demonstrate to elevator consultant and Owner's elevator supervisor that all systems specified are operating correctly and provide 8 hours training on use of Owner Interaction System.